

# 2019 Mecklenburg County Community Health Assessment



*Special ONE Charlotte Health Alliance Report Included*

# 2019 Mecklenburg County Community Health Assessment



*A profile of health indicators and prevention  
priorities for our community*

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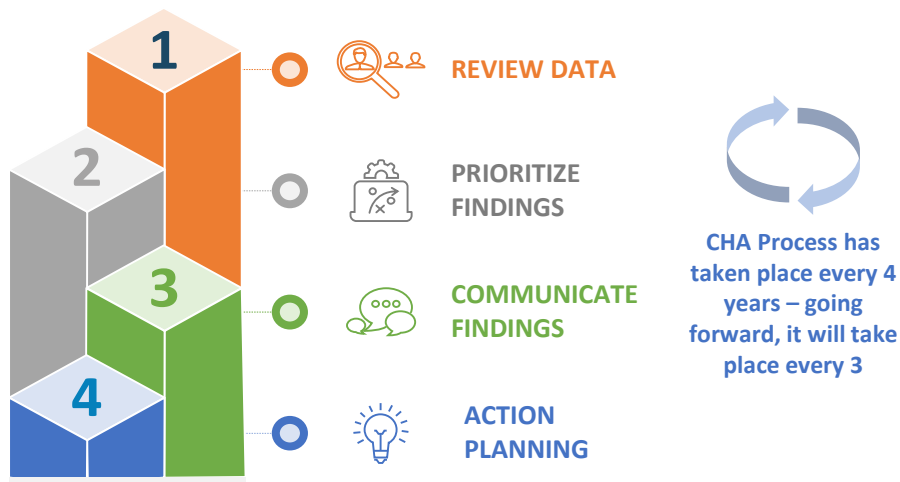
# Community Health Assessment: Executive Summary

## CHARGE

In the practice of public health, the community is the patient and the health of that patient is regularly monitored and evaluated by examining key indicators such as infant mortality, communicable disease rates and leading causes of death. Every four years, Mecklenburg County Public Health (MCPH) with a steering committee of community partners leads an extensive examination of the community's health through a process known as community health assessment (CHA). The CHA includes a review of community health indicators, a community opinion survey, priority setting activities and action planning to address top identified priorities.

Building from that process, Mecklenburg County Public Health, Novant Health and Atrium Health collaborated on the 2019 Mecklenburg County Community Health Assessment to update existing data and receive additional feedback from community. This work included the One Charlotte Listening Circles (findings can be found in the full report). Due to the timing of the alignment, new priorities were not determined but will be revisited during the next CHA cycle in 2022.

## PROCESS SUMMARY



## PRIORITIZING THE 2017 CHA FINDINGS

Gathering community input on the health issues included in the assessment is an integral part of the CHA process. The three methods used to collect community feedback were:

- (1) The Community Health Opinion Survey: 1,793 responses
- (2) Priority Setting Event: 125 attendees
- (3) Priority Setting “In A Box” presentations: Nearly 300 responses

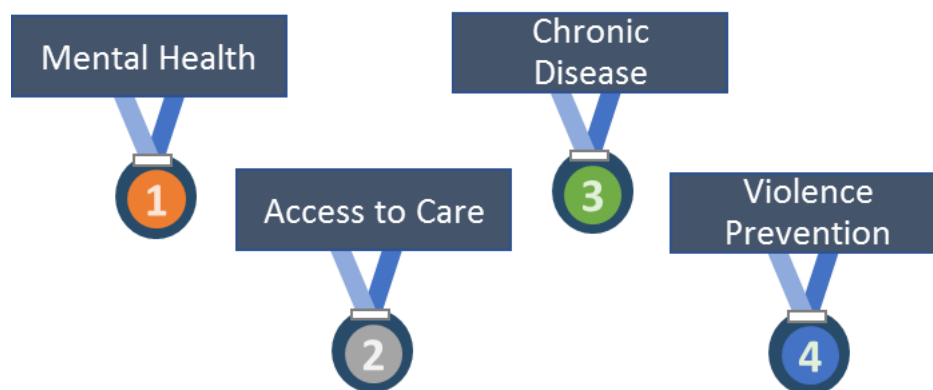
Input gathered from each of these methods was combined to determine our top health priorities.

## 2017 CHA HEALTH TOPICS AND TOP 3 PRIORITY AREAS

The top nine topic areas included in the 2017 CHA were selected and validated using a survey tool that was administered to community leaders and representatives of key health agencies in the county.

Health disparities and social determinants of health are not called out specifically as health issues but rather incorporated with each of the nine topic areas.

Consideration of the nine topic areas resulted in the following top four Priority Health Issues:



# Community Health Assessment: Executive Summary

## 2017 HEALTH ISSUE RANKING AND DATA HIGHLIGHTS

Health Issue	2017 Rank	2013 Rank	Data Highlights	Data Description
Access to Care	2	3	12% of Mecklenburg residents are uninsured (2017 US Census)	Access to care tracks indicators related to health insurance coverage, affordability of care and access to dental services. Sources include US Census and BRFSS.
Chronic Disease Prevention	3	1	64% of adults in Mecklenburg are either overweight or obese and 14% report smoking (2018 BRFSS)	Chronic disease section includes data on leading causes of death, health conditions like obesity and heart disease and health behavior data on nutrition, physical activity and tobacco use. Sources include BRFSS, YRBS and NC DHHS.
Environmental Health	6	6	Mecklenburg County meets all federal health standards for air quality (2016 LUESA)	Environmental health section tracks data related to the quality of the air, land and water in the county. Sources include Mecklenburg County LUESA, the City of Charlotte and the NC Lead Surveillance Program.
Healthy Pregnancy	8	7	Nearly 1 in 10 infants born in 2017 were born prematurely or at low birth weight (NC DHHS)	Healthy pregnancy examines rates of prenatal care, adolescent pregnancy and infant mortality. Sources include NC DHHS.
HIV & STDs	7	8	There are 6,847 people living with HIV in Mecklenburg County (NC DHHS)	HIV & STDs section tracks rates of sexually transmitted diseases as well as sexual health education. Sources include NC DHHS and YRBS.
Injury Prevention	9	9	Injury is the leading cause of death for persons ages 1-44 in Mecklenburg County (NC DHHS)	Injury prevention examines data related to leading causes of death, motor vehicle crashes, pedestrian/cyclist accidents. Sources include NC DHHS and NC DOT.
Mental Health	1	2	19% of Adults in Mecklenburg report being diagnosed with depression (2018 BRFSS)	Mental health includes data on depression, suicide and stigma related to accessing care. Sources include NC DHHS and BRFSS.
Substance Use Disorder	5	5	11% of Mecklenburg high school students reported binge drinking (2017 YRBS)	Substance use disorder examines rates of alcohol use among youth and adults, use of marijuana, prescription drugs and opioids. Sources include BRFSS, NC DETECT, YDS and YRBS.
Violence Prevention	4	4	Homicide rates increased 70% from 2014 to 2017 (CMPD)	Violence data includes homicide rates, domestic violence, bullying and carrying weapons on school property. Sources include CMPD and YRBS.

# Community Health Assessment: Introduction & Overview

## Introduction and Background

In Mecklenburg County, the 2017-2018 Community Health Assessment (CHA) was led by Mecklenburg County Public Health (MCPH) and included a multidisciplinary collaboration of partners, including representatives from both hospital systems, several community-based organizations and more than 2,000 community members.

Building from that process, Mecklenburg County Public Health, Novant Health and Atrium Health collaborated on the 2019 Mecklenburg County Community Assessment to receive additional feedback from community stakeholders and residents regarding how the collaborative can work intentionally to improve community health.

Much work has been done, but this is just the beginning. We are appreciative of all the time and insight individuals have shared to make this report possible. With the findings in this report, we hope to build upon the foundational work that MCPH and other partners have embarked on to inspire more collaboration and deepen our impact in the community.

Going forward, a collaborative assessment process led by Mecklenburg County Public Health will take place every three years. The next Mecklenburg County Health Assessment will take place in 2022.



## The Power of Alignment

In past years, our community has experienced separate health assessments:

- In 2017, Mecklenburg County Public Health led a Community Health Assessment (CHA) with several community partners, an extensive examination of the community's health identifying mental health, access to care, chronic disease and violence as priority health issues.
- In 2017, Atrium Health conducted a Community Health Improvement Study to better understand the drivers of health (social determinants of health) outside of the clinical setting. Key social determinants identified were food insecurity, education, employment, and housing.
- In 2019, Novant Health began work on a Community Health Needs Assessment (CHNA), comparing health needs identified by the community with NH Presbyterian Medical Center Emergency Department utilization and social determinants data to drive community benefit activity.

By aligning in the Community Health Assessment process and making a commitment to together address the top priorities identified within it, we can realize the following benefits:

- Eliminate question fatigue among community members by consolidating conversations.
- Publicly declare a foundation for our shared work.
- Exchange duplication of efforts for efficiency, collaboration, and collective impact.



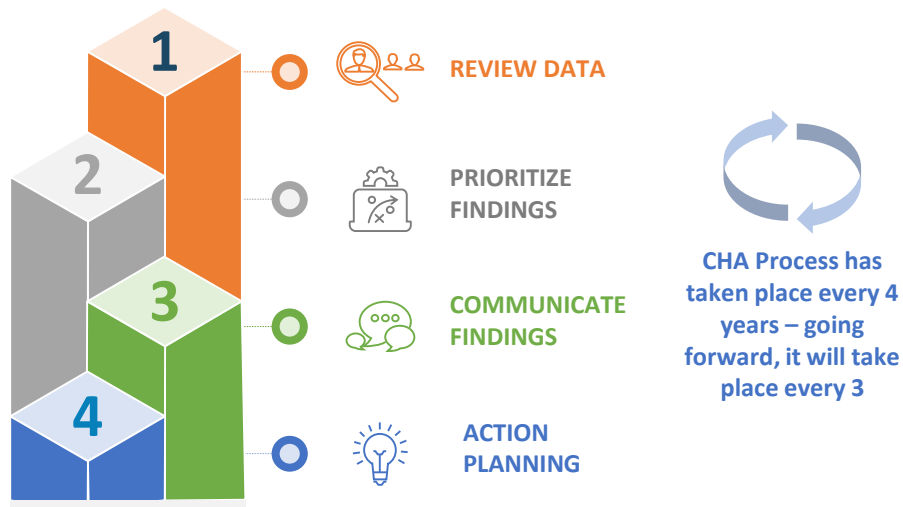
# Community Health Assessment: Introduction & Overview

## Charge

In the practice of public health, the community is the patient and the health of that patient is regularly monitored and evaluated by examining key indicators such as infant mortality, communicable disease rates and leading causes of death. Every four years, Mecklenburg County Public Health (MCPH) with a steering committee of community partners has led an extensive examination of the community's health through a process known as community health assessment (CHA). The CHA includes a review of community health indicators, a community opinion survey, community priority setting activities and action planning to address the top four identified priorities.



## Process Summary



## Process summary, continued

**Review Data:** MCPH Epidemiology program is responsible for gathering and analyzing primary and secondary data related to health.

**Prioritize Findings:** The CHA steering committee in partnership with the Epidemiology program collects community input on the health issues to determine the top priorities. Gathering community input on the health issues included in the assessment is an integral part of the CHA process. The three methods used to collect community feedback were:

**(1) The Community Health Opinion Survey: 1,793 responses**

**(2) Priority Setting Event: 125 attendees**

**(3) Priority Setting “In A Box” presentations: Nearly 300 responses**

Input gathered from each of these methods was combined to determine our top health priorities. More information on priority setting methods can be found in the Priority Setting chapter.

**Communicate Findings:** Health priorities and data highlights are communicated in a variety of ways including social media, agency websites, and follow up with all the community groups who participated in the prioritization process.

**Action Planning:** The action planning phase begins once the assessment report is completed. Community members and agency representatives are invited to plan specific, measurable actions to address the top four identified health issues.

## Leadership and Steering Committee

The CHA is coordinated by the MCPH Epidemiology program and guided by a steering committee. The Epidemiology program was primarily responsible for data collection, analysis and review while the steering committee provided input on the health issues to be included in the assessment, helped to develop and administer the Community Health Opinion Survey, helped plan and coordinate the Priority Setting Event and finally helped to develop and deliver a community presentation ("Priority Setting 'In A Box'") on the health issues to gather additional input for the priority setting process. Committee members represented diverse community interests and included a variety of subject matter experts on issues like health care access, injury, aging, communication, research and policy.

Steering Committee Partnerships	# of Partners
Public Health Agency	2
Hospital/Health Care Systems (Atrium Health & Novant Health)	3
Park & Recreation	1
Free/Low-Cost Clinic Network	1
Community Organizations	1
Educational Institutions (Professors & Students)	3
Faith Community	1

## Identification of 2017 health priorities

The nine topic areas included in the 2017 CHA were selected and validated using a survey tool that was administered to community leaders and representatives of key health agencies in the county. The survey included 15 health topics for consideration and asked respondents to rank the issues in order of importance. The top nine issues identified were the same nine issues included in the 2013 CHA and are as follows:

1. Access to Care
2. Chronic Disease Prevention
3. Environmental Health
4. Healthy Pregnancy
5. HIV and STDs
6. Injury
7. Mental Health
8. Substance Use Disorder
9. Violence Prevention

While the categories remained the same as those in the 2013 assessment, the steering committee recommended changing terms used to describe each category to be more descriptive. Those changes are as follows:

Responsible Sexual Behavior → HIV & STDs

Maternal & Child Health → Healthy Pregnancy

Substance Abuse → Substance Use Disorder

Health disparities and social determinants of health are not addressed as separate categories but rather are incorporated within the analysis of each of the nine topic areas.

## 2017 HEALTH ISSUE RANKING AND DATA HIGHLIGHTS

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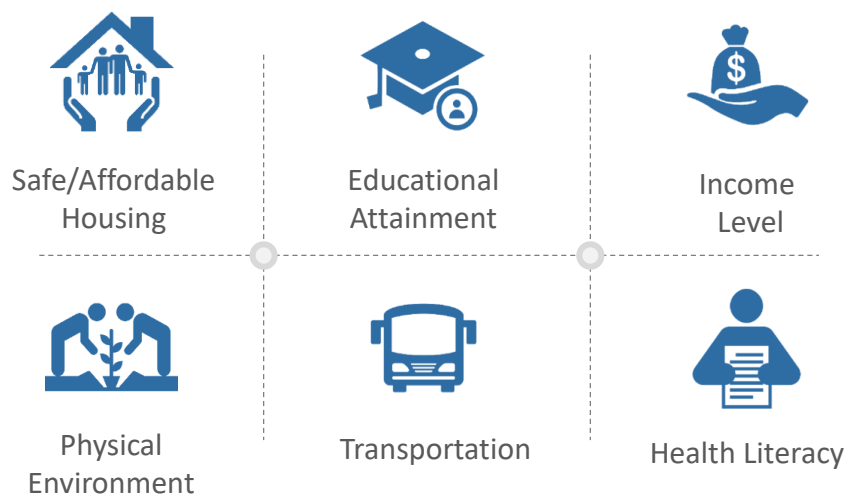


## Understanding the Report

The CHA is compiled and organized by specific public health issues (e.g. chronic disease, substance abuse) and presented as chapters. Key disparities and social determinants are highlighted within each chapter using the icons below.

## Graphic Key

The symbols below represent contributing factors to the health issues described in this report. Look for these symbols in this report to learn about root causes of health issues in Mecklenburg County.



*Icons used throughout this report are courtesy of the Noun Project*

## Data sources

The data used in this report reflects the most current data available at the time of publication. Unless otherwise noted, data is specific to Mecklenburg County. The main data sources for this report include:

- Atrium Health Trauma Center
- Behavioral Risk Factor Surveillance Survey (BRFSS)
- Charlotte Mecklenburg Police Department (CMPD)
- Mecklenburg County
  - Department of Social Services (DSS)
  - Geographic Information Systems (GIS)
  - Land Use & Environmental Services Agency (LUESA)
- North Carolina Electronic Disease Surveillance System (NCEDSS)
- North Carolina Department of Health & Human Services (NC DHHS)
  - Communicable Disease Program
  - HIV/STD Prevention and Care
  - State Center for Health Statistics
  - Vital Statistics
- North Carolina Disease Event Tracking & Epidemiologic Collection Tool (NC DETECT)
- North Carolina Department of Transportation (NC DOT)
- Youth Drug Survey (YDS)
- Youth Risk Behavior Survey (YRBS)
- US Census, American Community Survey

## Overview

The CHA steering committee in partnership with the Epidemiology program collects community input on the health issues to determine the top priorities. Gathering community input on the health issues included in the assessment is an integral part of the CHA process. Previously, the two primary methods used to collect community input were the Community Health Opinion Survey and the Priority Setting Event. To enhance community input opportunities, the steering committee developed a third method for the 2017 assessment called “Priority Setting in a Box”

## Prioritization methods

**1. Community Health Opinion Survey:** The survey tool was used as a way to collect community feedback on the top health priorities for the county and included additional questions about other aspects of community health (safety, availability of resources and economic opportunities) and demographic questions. A total of 1,793 individuals responded to the survey which was available in electronic and paper formats as well as in both English and Spanish. The survey was open from summer 2017 to early fall 2017.

The CHA steering committee members helped to disseminate the survey via city and county social media outlets, neighborhood association groups, personal and professional contacts. MCPH staff targeted specific groups to ensure that the survey sample would match the county demographics. Targeted outreach efforts were made to reach the following subgroups: Hispanics, men, seniors, low-income and homeless.

For more information on the survey, see the “Primary Data Collection” chapter and the Appendix.

## Prioritization Methods, continued

**2. Priority Setting Event:** The Priority Setting Event was presented in partnership with UNC Charlotte’s Graduate Public Health Association and took place on December 8, 2017. The event was nearly a full day and was open to all residents of Mecklenburg County. A total of 125 individuals attended the event representing various sectors including health care, education, local government, non-profits and the community at large. New for the 2017 assessment, participants used personal devices (phones, iPads, etc.) to complete their ranking online for faster analysis.

The Priority Setting event featured nine separate presentations, one for each of the topic areas included in the assessment, given by subject matter expert. Following each presentation, participants had table discussions on each issue and then ranked the issue with regard to the following 5 criteria:

- 1) Magnitude:** Proportion of the population affected or vulnerable,
- 2) Severity:** Impact on mortality, morbidity, disability and quality of life,
- 3) Intervention Effectiveness:** Proven interventions exist that are feasible from a practical, economic and political viewpoint,
- 4) Public Concern:** Degree of public concern and/or awareness,
- 5) Urgency:** Need for action based on degree and rate of growth (decline); Potential for affecting and amplifying other health or socioeconomic issues; timing for public awareness, collaboration, and funding is present.

## Prioritization methods, continued

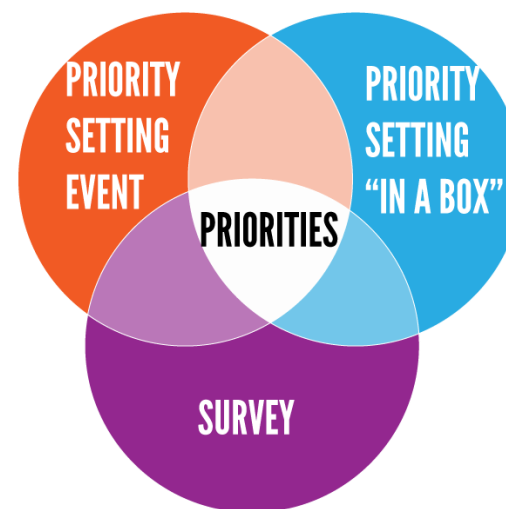
**3. Priority Setting “In a Box”:** For the 2017 assessment, the steering committee developed a third method of gathering community input. The term “in a box” was used to describe this method because it was essentially a toolkit that steering committee members could use to offer a condensed version of the full Priority Setting Event (see previous section) at a variety of community meetings. This method allowed steering committee members to work with existing community groups to have an abbreviated priority setting exercise added to a regular meeting agenda. This method helped bring more diverse community voices into the priority setting process.

Steering committee members gave a brief, 15-minute presentation on the CHA process and the nine health topics included and asked meeting participants to select the top 4 issues they thought needed to be addressed. Nearly 300 community members participated in the Priority Setting “In a Box” events. Community groups who participated in these events included:

- Generation Nation
- On The Table CLT, Mecklenburg County
- Public Health Lunch & Learns
- Black Treatment AIDS Network (BTAN)
- Leadership Charlotte
- Safe Kids parent meeting
- Parenting classes
- Head Start family class
- YMCA older adult education class
- Kohl’s staff meeting
- Atrium Health Emergency Medicine

## Final priorities

Input from all three prioritization methods were combined to arrive at the final list of priorities for Mecklenburg County.



The nine health issues ranked in order of priority are:

1. **Mental Health**
2. **Access to Care**
3. **Chronic Disease Prevention**
4. **Violence Prevention**
5. Substance Use Disorder
6. Healthy Environment
7. HIV & STD Prevention
8. Healthy Pregnancy
9. Injury Prevention

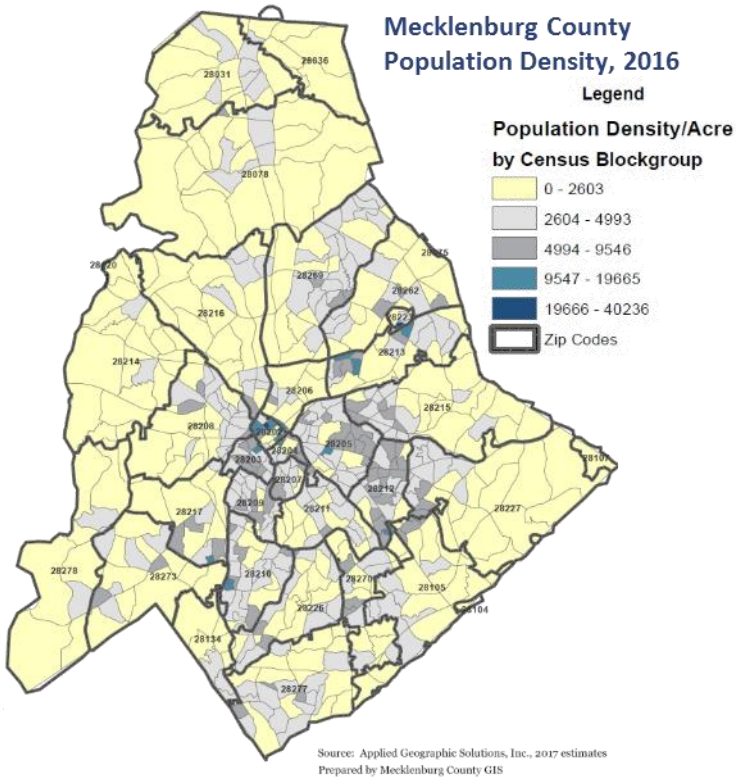
**Community  
Action Plans**

# Mecklenburg County Overview



# Demographics

## Mecklenburg County Population Density, 2016



**Over 1 million people** live in Mecklenburg, making it the most populated county in North Carolina. The area continues to grow, increasing in population by 15% between years 2010 and 2017.

- In comparison to North Carolina, Mecklenburg has a younger population.
- Mecklenburg County is increasingly diverse. Racial and ethnic minorities account for the highest rate of growth across the county.
- While the median household income is higher than the State, the number of persons without insurance is slightly higher in the county.

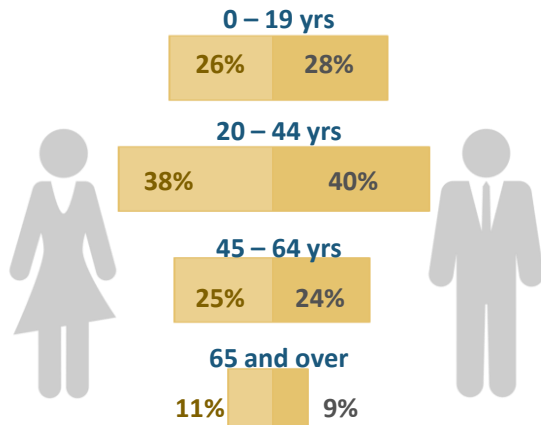
## 2017 Population Estimates, Mecklenburg and North Carolina

	Mecklenburg	North Carolina
<b>Total Population</b>	<b>1,076,837</b>	<b>10,273,419</b>
% Change in Population (2010 – 2017)	15% ↑	11% ↑
Median Age	35 years	39 years
Median Household Income	\$65,588	\$52,752
% in Poverty	11.1%	14.7%
% Uninsured	15.6%	15.8%

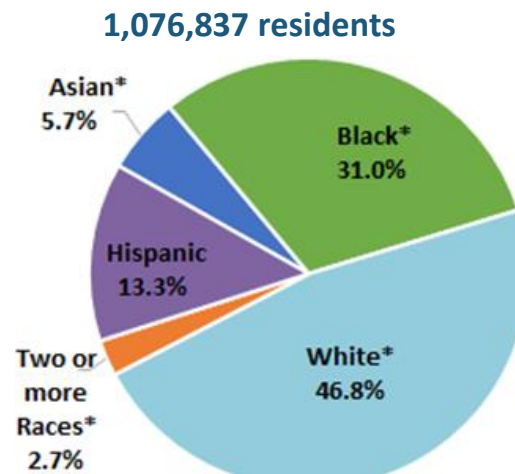
Source for table and graphs: US Census, American Factfinder

## 2017 Mecklenburg County Population Estimates At a Glance

### Population by Age and Gender

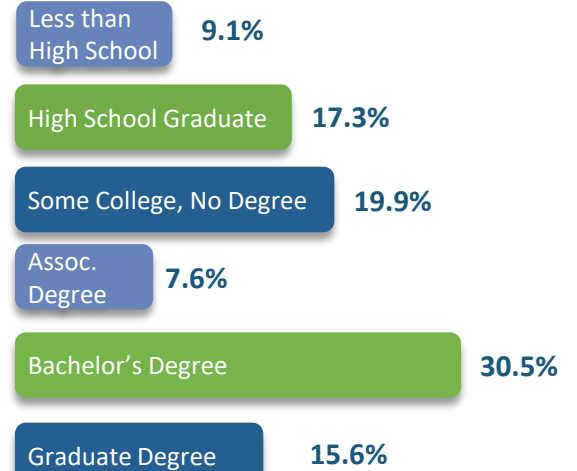


### Population by Race and Ethnicity



\*non-Hispanic

### Population by Educational Attainment\*



\*Population 25 and older



# Vulnerable Populations

The World Health Organization defines vulnerability as “the degree to which a population, individual or organization is unable to anticipate, cope with, resist and recover from the impacts of disasters.” Vulnerable populations may include children, persons who are poor, individuals with disabilities, uninsured populations, persons suffering from homelessness, the elderly and frail or other special populations in need. These populations may face a higher risk for disease as well as obstacles to getting rapid and appropriate medical care if they are injured or fall ill as a result of environmental hazards.

## Mecklenburg County Residents with Disabilities: By Disability Type

Source: US Census, American Fact Finder, 2017 Population Estimates

### Residents with Ambulatory Difficulties



**4%**

or 41,679 residents have an ambulatory disability

**64%  
Females**



**36%  
Males**

### Residents with Cognitive Difficulties



**3%**

or 34,342 residents have a cognitive disability

**53%  
Females**



**47%  
Males**

### Residents with Vision Difficulties



**1.4%**

or 15,491 residents have visual difficulties

**53%  
Females**



**47%  
Males**

### Residents with Hearing Difficulties



**2%**

or 23,966 residents have hearing difficulties

**46%  
Females**



**54%  
Males**

Source: US Census, American Fact Finder, 2017 Population Estimates

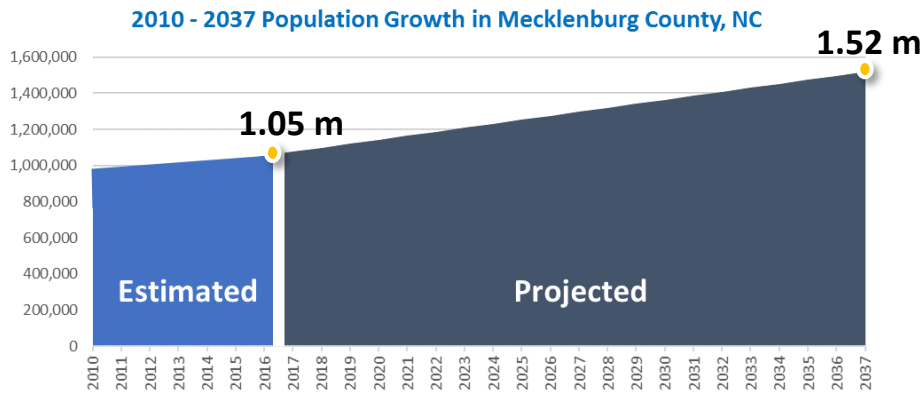
## Selected Vulnerable Population Groups, Mecklenburg Residents

By Age	Number of Residents	% of Total Population
Under 5 years	72,274	6.7%
5 – 17 years	185,051	17.2%
65 years and older	117,823	10.9%
Other Characteristics	Number of Residents	% of Total Population
Unemployed	43,026	4.2%
Uninsured	123,306	11.5%
Living in Poverty	126,156	12.1%
Limited English	95,705	9.5%
Homeless	1,476	0.1%

Source: US Census, American Fact Finder, 2017 Population Estimates

# Population Growth & Life Expectancy

Mecklenburg's population is expected to increase to 1.5 million by 2037

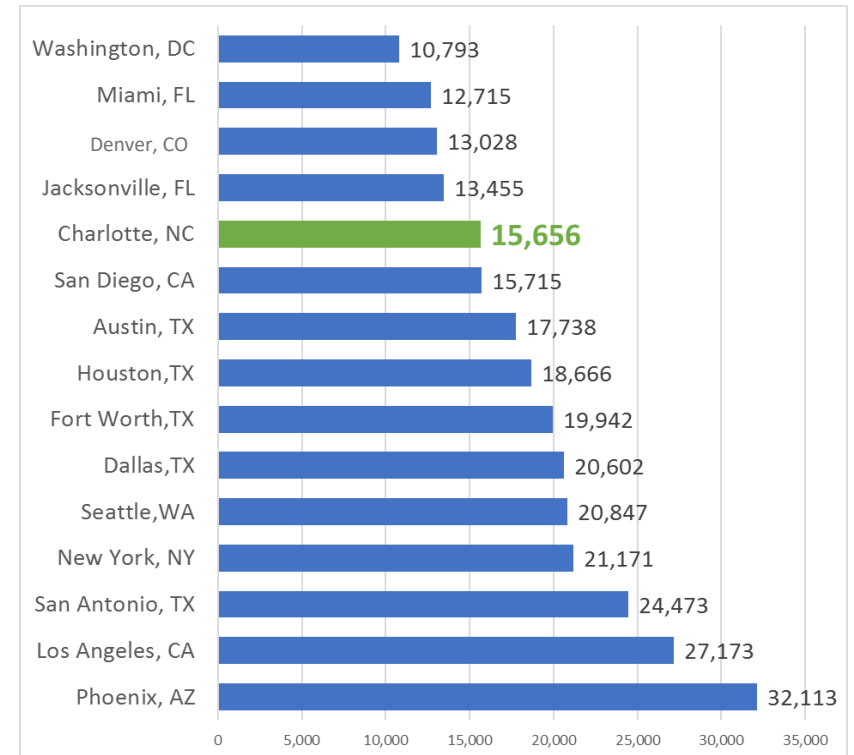


Source: NC Office of State Budget and Management, Population Projections

In 2016 Charlotte, NC had one of the largest numeric population increases in the Nation.

- The Southern region of the United States continues to be an area of rapid growth. According to the latest data from the US Census, ten of the top 15 fastest growing cities are in the South.
- Between July 1, 2015 and July 1, 2016 Charlotte, NC added 15,656 new residents to its population. When compared to other large US cities, Charlotte ranked 11<sup>th</sup> in the Nation for numeric increase between 2015 and 2016.

15 Cities With the Largest Numeric Increase Between July 2015 and July 2016 (Populations > 50,000 in 2015)



Source: US Census Bureau, American FactFinder

Life expectancy at birth has improved over time in Mecklenburg

## People are Living Longer

2015 -2017 Life expectancy at birth is:



## Life Expectancy Varies by Gender



## By Race

**82.2**  
years  
Whites

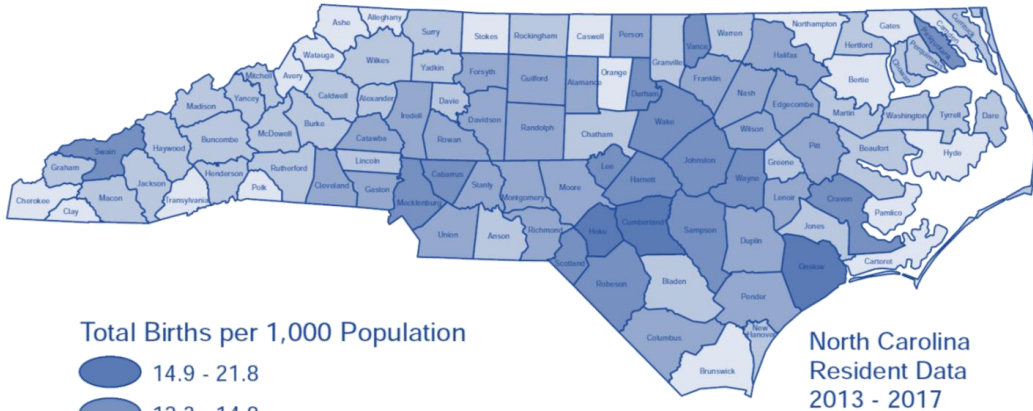
**77.1**  
years  
African Americans

African Americans

Source: NC DHHS Vital Statistics Reports

# Births

## 2013 – 2017 NC Birth Rates per 1,000 Live Births

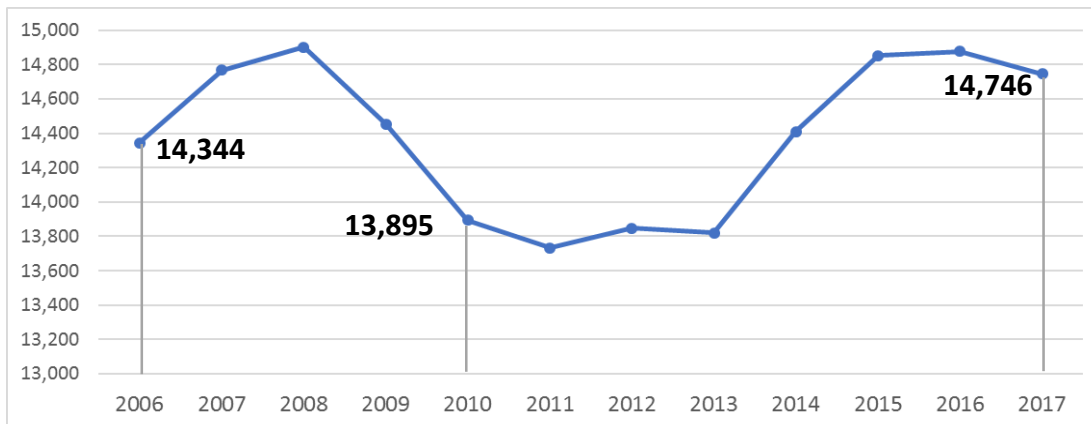


Map Source: NC DHHS, Vital Statistics, Volume I Geographic Variations in Birth Rates

## Live Births in Mecklenburg County

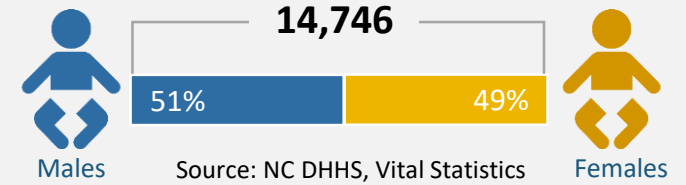
- After declining for several years, births have increased in the county. Live births increased by 7% between 2010 and 2016 and dropped slightly to 14,746 births in 2017.
- Additional data on Maternal and Child Health can be found in the Healthy Pregnancy section of this report.

## 2006 – 2017 Number of Live Births by Year, Mecklenburg Residents



Source: NC DHHS, Vital Statistics Data

## Live Births, 2017



## 4 out 10 births were White



## 3 out 10 births were African American



## 2 out 10 births were Hispanic



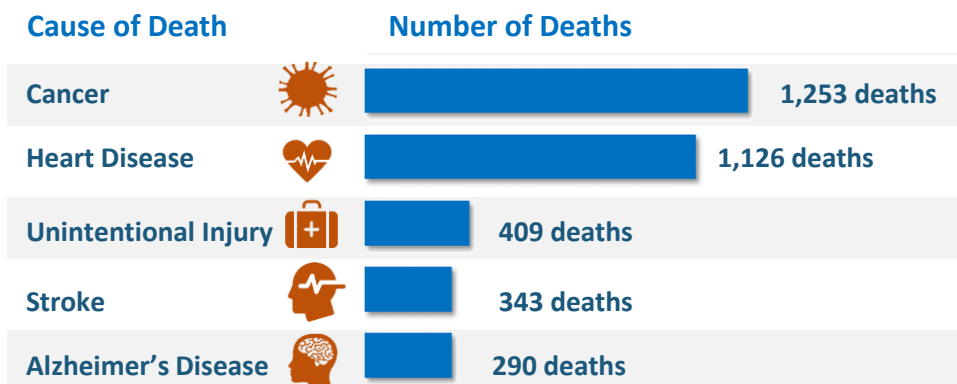
## 1 out 10 births were Other Races



# Leading Causes of Death

## 2017 Leading Causes of Death, Mecklenburg

- In 2017, there were 6,161 deaths reported in the county. Chronic conditions, such as Cancer, Heart Disease and Stroke account for nearly 50% of all deaths.



Source: NC DHHS, Vital Statistics

## Leading Causes of Death: How Do We Compare?



Mecklenburg	North Carolina	United States
1. Cancer	1. Cancer	1. Heart Disease
2. Heart Disease	2. Heart Disease	2. Cancer
3. Unintentional Injury	3. Unintentional Injury	3. Unintentional Injury
4. Stroke	4. COPD	4. COPD
5. Alzheimer's Disease	5. Stroke	5. Alzheimer's Disease <sup>1</sup>
5. COPD	5. Alzheimer's Disease	5. Stroke <sup>1</sup>

<sup>1</sup> Alzheimer's Disease and Stroke tied for 5th place among leading causes of death in the US.

Source: Centers for Disease Control, 2016 United States Mortality Data  
NC DHHS, 2017 Vital Statistics Data for North Carolina and Mecklenburg

## Premature Deaths: Years of Potential Life Lost (YPLL)

Premature deaths are deaths that occur before a person reaches a given age. Many of these deaths are considered to be preventable and understanding their causes can lead to better interventions and prevention strategies for at risk populations.

Years of Potential Life Lost (YPLL) is a measure of early death and represents the difference between the life expectancy of a person (measured in years) and their actual age at death.

- Between 2012 and 2016, there were 28,779 premature deaths in Mecklenburg. Residents who died lost an average of 18 years of life due to early death.
- Deaths due to Homicide resulted in the highest average years of life lost (48 years), followed by Suicides (37 years) and Unintentional Injuries (33 years).

## 2012 – 2016 Selected Leading Causes Premature of Death and Average Years of Life Lost, Mecklenburg

Cause of Death	2012 – 2016 Total Deaths	Average Years of Life Lost per Death
• Cancer	6,414	18.3 years
• Diseases of Heart	5,531	14.9 Years
• Alzheimer's disease	1,557	9.1 Years
• Stroke	1,550	13.9 Years
• Unintentional Injuries	1,456	33.3 Years
• Chronic Lower Respiratory Diseases	1,234	13.4 Years
• Suicide	483	36.8 Years
• Homicide	319	47.9 Years

Source: NC DHHS, 2016 County Health Data Book

# Mecklenburg Peer Counties

Benchmarking Mecklenburg health data against other counties is one way to assess improvement in population health. These comparisons can provide context and demonstrate that where you live can greatly impact your ability to achieve optimal health.

Mecklenburg peer counties were chosen from a list established by the Robert Wood Johnson Foundation (County Health Rankings) and the Centers for Disease Control (Community Health Status Indicators). The majority of these counties are located in the Southeast region of the United States and have key demographic, social and economic indicators in common with Mecklenburg. Three counties (Hennepin County, Minnesota; Alexandria City, Virginia; King County, WA) were chosen as aspirational peer counties due to their high rankings in health behaviors and social/economic factors.

In general Mecklenburg County ranks similar to or better than most peer counties when examining health data.

## Selected Peer Counties for Mecklenburg



### Peer County Comparison: Social and Economic Data

County Name, State	Mecklenburg, NC	Wake, NC	Davidson, TN	Jefferson, AL	Pinellas, FL	Franklin, OH
Major City	Charlotte, NC	Raleigh, NC	Nashville, TN	Birmingham, AL	St. Petersburg, FL	Columbus, OH
Total Population <sup>1</sup>	1,054,834	1,046,791	684,410	659,521	960,730	1,264,518
% Change in Population (2010 – 2016) <sup>1</sup>	15% ↑	16% ↑	9% ↑	0.2% ↑	5% ↑	9% ↑
Median Age <sup>1</sup>	35 years	36 years	34 years	38 years	48 years	34 years
Median Household Income <sup>1</sup>	\$62,978	\$76,097	\$54,855	\$50,180	\$50,036	\$56,055
% Children in Poverty <sup>2</sup>	19%	15%	27%	26%	21%	25%
% Uninsured <sup>1</sup>	11.0%	7.6%	11.3%	8.6%	10.8%	7.1%
% Unemployment <sup>2</sup>	5.4%	4.7%	4.5%	5.8%	4.9%	4.1%
On Time High School Graduation Rate <sup>2</sup>	88%	86%	79%	89%	78%	66%

Sources:

<sup>1</sup> US Census, American Factfinder, 2016 Population Estimates

<sup>2</sup> Robert Wood Johnson Foundation, 2017 County Health Rankings Data



# Mecklenburg Peer Counties



## Peer County Comparison: Social and Economic Data

County Name, State	Bexar, TX	Tarrant, TX	Travis ,TX
Major City	San Antonio, TX	Ft Worth, TX	Austin, TX
Total Population <sup>1</sup>	1,928,680	2,016,872	1,199,323
% Change in Population (2010 – 2016) <sup>1</sup>	13% ↑	11% ↑	17% ↑
Median Age <sup>1</sup>	34 years	34 years	34 years
Median Household Income <sup>1</sup>	\$53,210	\$61,534	\$70,158
% Children in Poverty <sup>2</sup>	22%	18%	18%
% Uninsured <sup>1</sup>	14.7%	15.6%	13.1%
% Unemployment <sup>2</sup>	3.8%	4.2%	3.3%
On Time High School Graduation Rate <sup>2</sup>	88%	89%	90%

## Aspirational Counties

These peer counties were chosen for their high rankings in overall health status, social and economic factors using health and economic data from CountyHealthRankings.org.

Alexandria City, VA	Hennepin, MN	King, WA
Alexandria, VA	Minneapolis, MN	Seattle, WA
155,810	1,232,483	2,149,970
11% ↑	7% ↑	11% ↑
37 years	36 years	37 years
\$87,920	\$71,200	\$86,095
15%	14%	11%
14.6%	4.3%	5.0%
3.3%	3.3%	4.4%
72%	76%	82%

# Mecklenburg Peer County Health Data

Peer county health data comes from the 2017 County Health Rankings located online at: [www.countyhealthrankings.com](http://www.countyhealthrankings.com). Additional Health Data for peer counties can be found in the Appendix.

## Quality of Life Measures

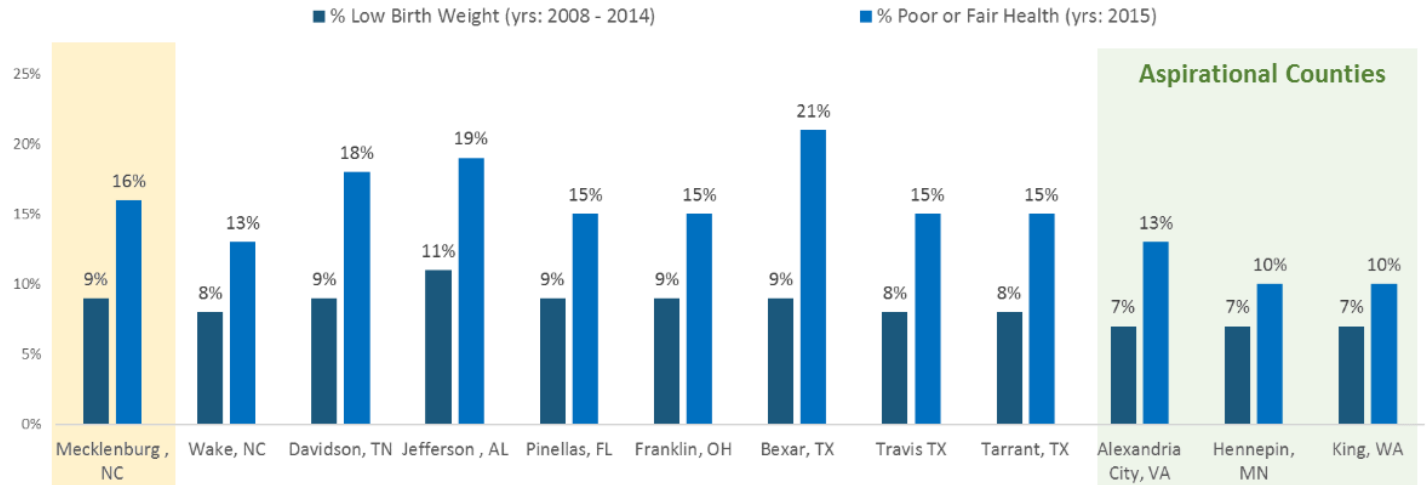
### Low Birth Weight and Overall Health Status

**Poor or Fair Health:** % of adults who consider themselves to be in poor or fair health. (BRFSS, 2015)

**Importance of Indicator:** Self-reported health status is used as a measure of health-related quality of life.

**Low Birth Weight (LBW):** % of live births where the infant weighed less than 2,500 grams. Data for this County Health Ranking measure is based on a 7 year average. (CDC, 2008 - 2014)

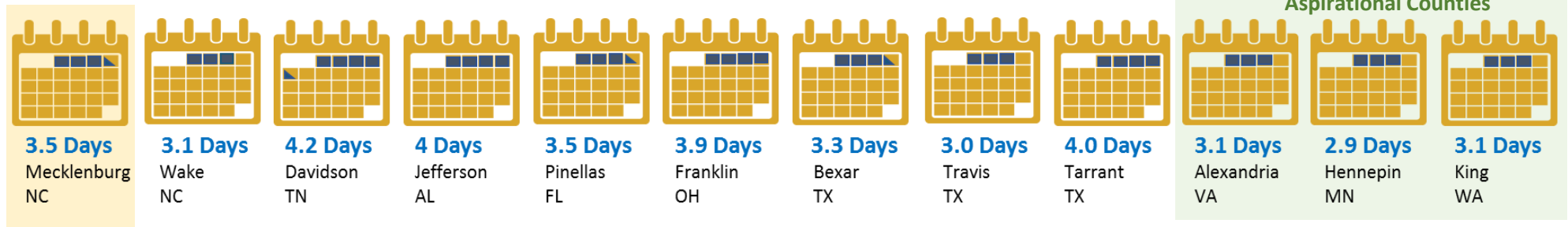
**Importance of Indicator:** LBW serves as a predictor of early death and illness over the life course.



## Mental Health

**Mental Health Days:** Average number of mentally unhealthy days reported by Adults in past 30 days Age-adjusted (BRFSS, 2015)

**Importance of Indicator:** Measuring the number of days when people report that their mental health is not good is an important part of health-related quality of life.



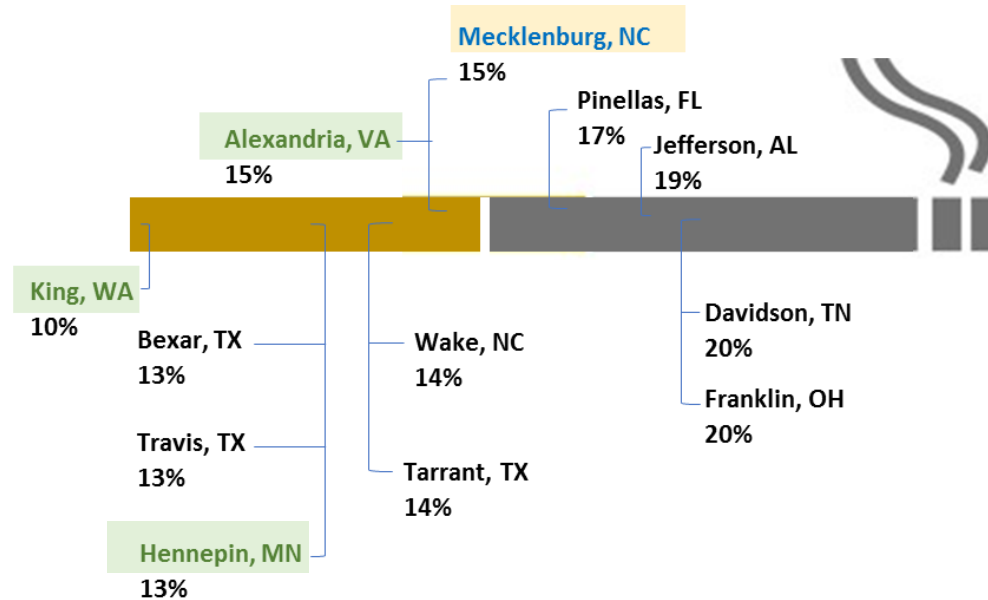
# Mecklenburg Peer County Health Data

## Health Factors

### Smoking

**Adult Smoking:** % of adults who currently smoke. (BRFSS, 2015)

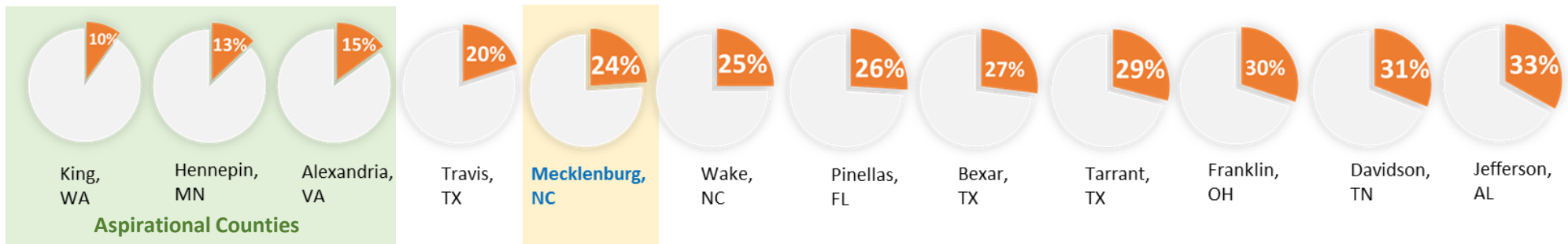
**Importance of Indicator:** Smoking can negatively impact health. In the nation, smoking accounts for 443,000 premature deaths annually.



### Obesity

**Obesity Rates:** Percentage of adults (age 20 and over) that report a BMI of 30 or more. (BRFSS, 2013)

**Importance of Indicator:** Obesity increases a person's risk for various health conditions including cardiovascular disease, diabetes, cancer and hypertension.



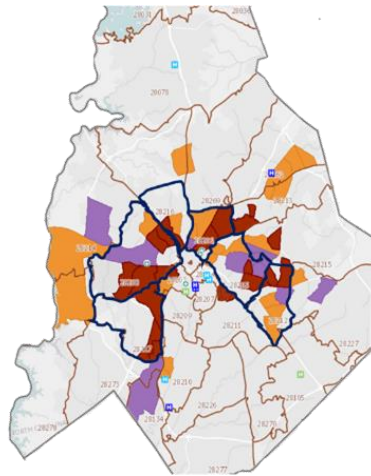
# Social Determinants of Health

At every stage of life, health is determined by complex interactions between social and economic factors, the physical environment and individual behavior. The social conditions we face each day, where we are born, live, work and play, have a greater impact on our health and life expectancy than the health care we receive. For additional maps of Mecklenburg County social and economic indicators see the Appendix.

## Education, Income and Health

- People with less education and income tend to live in neighborhoods which lack access to nutritious foods and safe places to exercise.
- These residents may also be exposed to risk factors that increase their chances for chronic diseases later in life.
- A crescent-shaped area of poverty and low educational attainment exists around the center city of Charlotte which tends to have higher rates of chronic disease and deaths.

## Mecklenburg County Public Health Priority Areas



Source: American Community Survey, 2012-2016

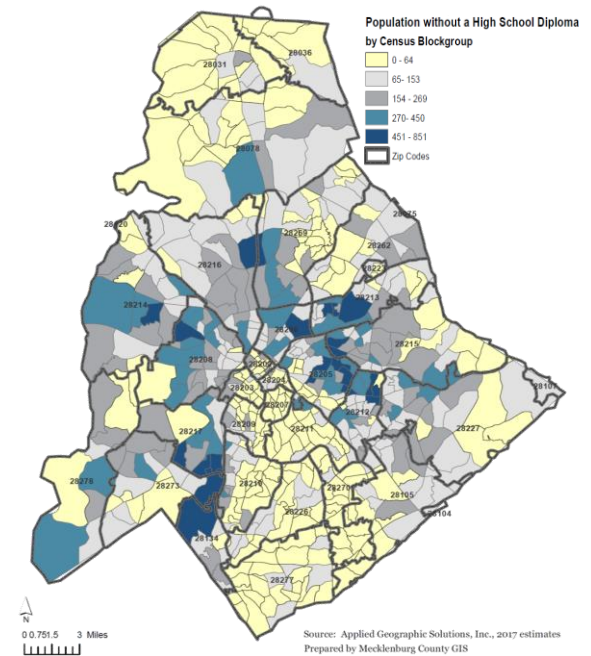
## Disparities in Selected Risk Factors for Chronic Diseases by Education and Income

2018 Chronic Conditions in Mecklenburg County by INCOME		
Health Condition	Persons Making Less than \$50,000 a year	Persons Making \$50,000 or more a year
Obese (BMI of 30.0 or greater)	39.7%	24.9%
Current Smoking	17.8%	8.5%
No Physical Activity	25.8%	10.8%

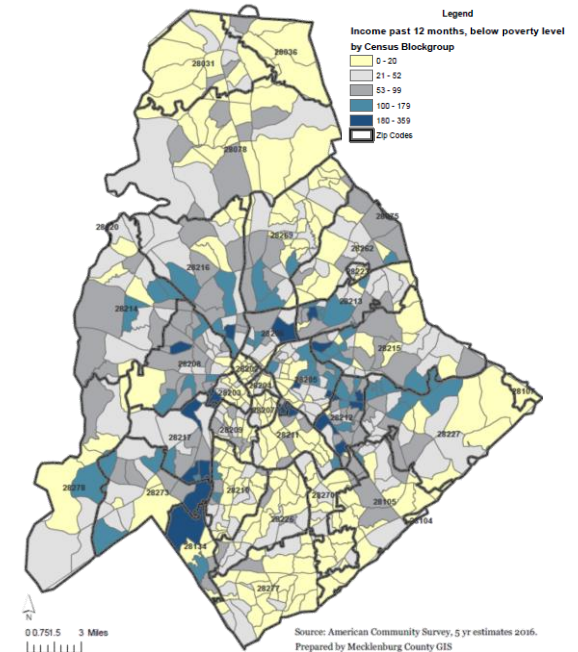
2018 Chronic Conditions in Mecklenburg County by EDUCATION		
Health Condition	High School Diploma or Less	Persons with College Education
Obese (BMI of 30.0 or greater)	35.7%	30.5%
Current Smoking	23.2%	10.2%
No Physical Activity	31.5%	15.4%

Source: 2018 Local Behavior Risk Factor Surveillance System, Mecklenburg County

## 2016 Population with No High School Diploma



## 2016 Income Below Poverty Level



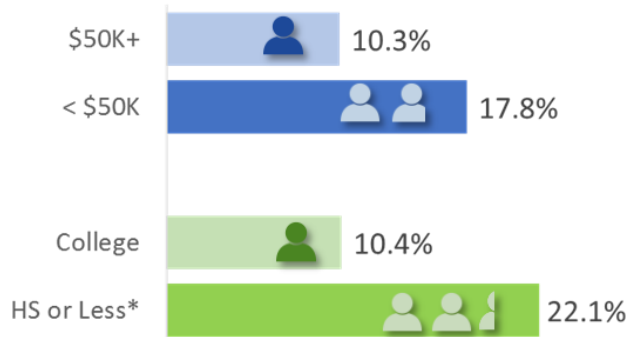
# Social Determinants of Health

## 2017 Local Behavior Risk Factor Surveillance Survey, Mecklenburg Differences in Chronic Conditions and Risk Factors by Education and Income

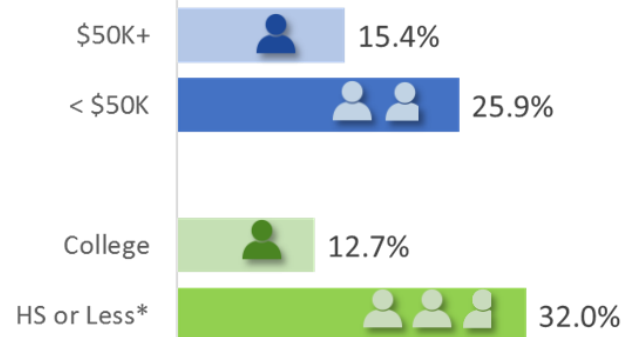
### Risk Factors for Chronic Conditions

Low income adults were 1.7 times more likely to smoke and 1.6 times more likely to be physically inactive than adults with higher income levels. Persons with low educational attainment were 2.1 times more likely to smoke and nearly 3 times more likely to be physically inactive than adults who attended college.

#### % of Adults who Currently Smoke By Education and Income Levels



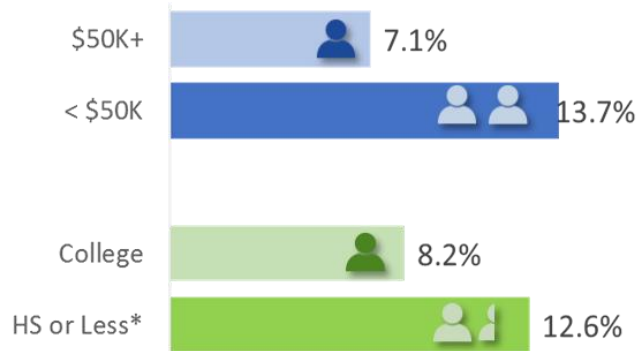
#### % of Adults who are Physical Inactive By Education and Income Levels



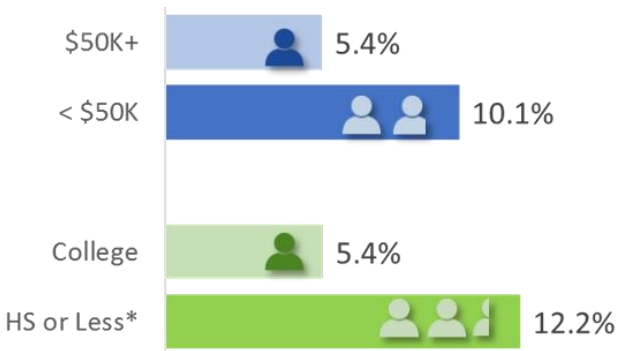
### Prevalence of Chronic Conditions

Low income adults were twice as likely to report having diabetes or cardiovascular disease than are higher income adults. Persons with low educational attainment were 1.5 times more likely have diabetes and over twice as likely to have cardiovascular disease than persons who attended college.

#### % Adults with Diabetes By Education and Income Levels

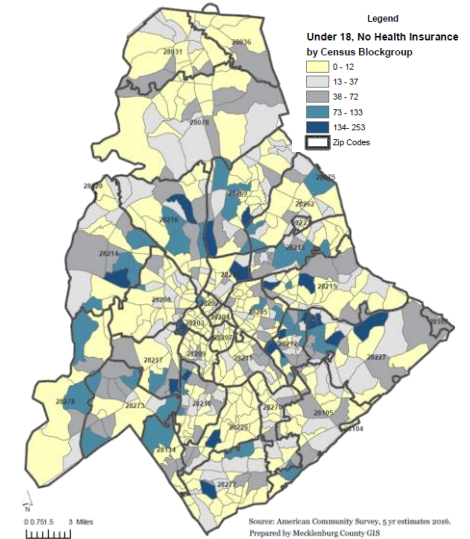


#### % Adults with Cardiovascular Disease By Education and Income Levels

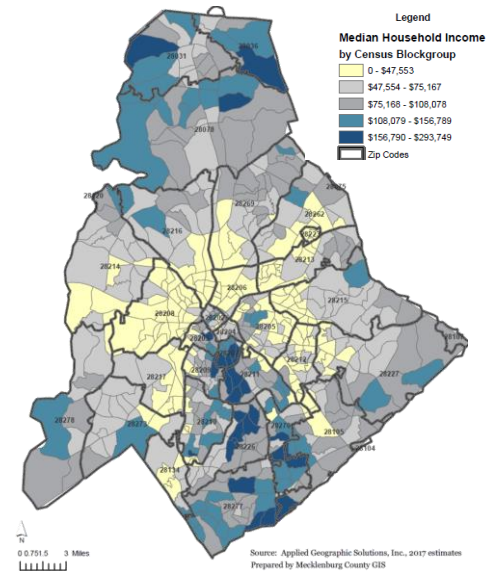


\*HS or Less = High School Diploma or Less

## 2016 Population <18 yrs, No Health Insurance



## 2016 Median Household Income

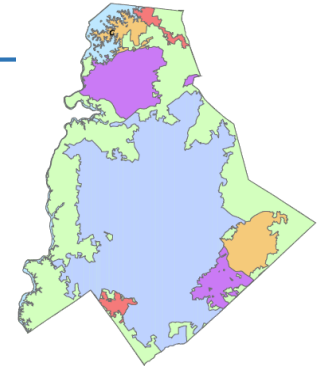




# Mecklenburg Municipality Profiles

While the city of Charlotte is a major hub within Mecklenburg, the county contains several towns and cities with diverse populations and social and economic factors. These towns and cities include: Charlotte, Cornelius, Davidson, Huntersville, Matthews, Mint Hill and Pineville.

The following table summarizes demographic, economic and social characteristics for each town and city.



## Municipality Profiles: Demographics

	Charlotte	Cornelius	Davidson	Huntersville	Matthews	Mint Hill	Pineville
<b>Total Population</b>	<b>792,137</b>	<b>26,866</b>	<b>11,765</b>	<b>50,433</b>	<b>29,352</b>	<b>24,545</b>	<b>8,066</b>
<b>Age</b>							
0-19 yrs.	27.3%	26.5%	31.7%	29.6%	25.5%	24.3%	23.8%
20-64 yrs.	63.5%	61.3%	57.1%	62.2%	58.5%	59.3%	59.1%
65+ yrs.	9.2%	12.1%	11.2%	8.2%	16.0%	16.4%	17.1%
<b>Median Age</b>	<b>33.7 years</b>	<b>38.3 years</b>	<b>36.1 years</b>	<b>36.2 years</b>	<b>42.6 years</b>	<b>43.6 years</b>	<b>33.9 years</b>
<b>Race/ Ethnicity<sup>1</sup></b>							
White	43.5%	83.3%	81.0%	79.7%	79.7%	74.7%	52.4%
Black	34.4%	5.6%	9.3%	10.0%	10.4%	10.9%	28.2%
American Indian	0.2%	0.0%	0.8%	0.3%	0.3%	0.1%	0.0%
Asian	5.7%	3.1%	1.8%	2.2%	3.5%	2.4%	2.8%
Native Hawaiian and Pacific Islander	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other <sup>2</sup>	2.5%	1.1%	1.0%	2.3%	1.6%	2.9%	1.8%
Hispanic	13.5%	6.9%	6.1%	5.5%	4.4%	8.9%	14.9%

Source: US Census, American FactFinder, 2016 Population Estimates

<sup>1</sup> Racial groups are Non Hispanic

<sup>2</sup> Other includes persons of some other race and persons with two or more races

# Mecklenburg Municipality Profiles

Municipality Profiles: Social and Economic Factors							
	Charlotte	Cornelius	Davidson	Huntersville	Matthews	Mint Hill	Pineville
<b>Total Population</b>	<b>792,137</b>	<b>26,866</b>	<b>11,765</b>	<b>50,433</b>	<b>29,352</b>	<b>24,545</b>	<b>8,066</b>
<b>Economic</b>							
Unemployment	9.5%	5.3%	6.6%	6.0%	5.5%	5.6%	10.8%
<b>Median Household Income</b>	<b>\$53,637</b>	<b>\$80,472</b>	<b>\$105,083</b>	<b>\$90,253</b>	<b>\$73,137</b>	<b>\$67,477</b>	<b>\$35,191</b>
Uninsured	16.3%	10.2%	6.0%	8.7%	8.9%	9.6%	18.8%
Poverty Status	16.8%	6.7%	5.7%	5.1%	6.1%	10.4%	20.5%
<b>Housing</b>							
Owner	54.1%	65.1%	75.4%	75.6%	75.4%	79.3%	31.6%
Renter	45.9%	34.9%	24.6%	24.4%	24.6%	20.7%	68.4%
<b>Transportation</b>							
No Vehicles Available	7.8%	3.7%	1.9%	2.0%	4.4%	2.9%	13.9%
<b>Educational Attainment</b>							
Less than 9 <sup>th</sup> grade	5.2%	1.7%	0.7%	1.9%	2.3%	3.6%	3.9%
9 <sup>th</sup> to 12 <sup>th</sup> grade, no diploma	6.4%	2.6%	1.9%	2.6%	3.3%	4.4%	4.9%
High school graduate (includes equivalency)	19.3%	15.6%	10.4%	14.7%	16.5%	22.8%	23.8%
Some college, no degree	20.6%	18.5%	15.3%	18.8%	18.4%	26.6%	26.4%
Associate's degree	7.2%	8.8%	4.8%	7.1%	8.3%	7.4%	7.2%
Bachelor's degree	27.7%	34.2%	34.3%	38.6%	34.7%	25.1%	27.4%
Graduate or professional degree	13.6%	18.6%	32.6%	16.3%	16.4%	10.0%	6.4%

Source: US Census, American FactFinder, 2016 Population Estimates

# Primary Data Collection

## 2017 Mecklenburg County CHA Health Opinion Survey

With guidance from the CHA Advisory Group, the MCHD Epidemiology Program developed a health opinion survey for Mecklenburg County residents. Rather than focusing on specific diseases or conditions for which secondary data is readily available, residents were asked to reflect on various issues and challenges facing their communities. Community was defined as the resident's neighborhood or place of immediate residence as oppose to the entire county.

The latter portion of the survey asked participants their opinions on the nine identified health focus areas, health concerns related to the social determinants of health and finally demographic information.

### Methodology

The CHA Health Opinion Survey was available to Mecklenburg County residents only. The survey was open for responses from June 2017 to November 2017. Surveys were administered electronically through Qualtrics® and in paper copy in both English and Spanish languages.

The sampling method used for this survey was convenience sampling which is an inexpensive and quick way to collect data. Links to the online survey were sent via email to elected officials of the county, city and towns; heads of city neighborhood associations; city and county employees and through various contact lists. The survey link was also posted on the health department website and the Mecklenburg County Facebook page. All recipients of the email were encouraged to share the link among their own contacts.

A targeted distribution of paper copies was used to reach areas of the population that may not have access to a computer. Paper copies were distributed at the following locations: Care Ring, Charlotte Community Health Clinic, Bethesda Health Center, Salvation Army Center of Hope, the Rosa Parks Farmers Market and various churches throughout the county.

## Characteristics of Residents Participating in the Mecklenburg Community Health Assessment Survey 2017

Total Number of Residents Surveyed 1,793

Gender	Number	%
Male	388	23.3
Female	1273	76.3
Other	8	0.5
<b>Race/ Ethnicity</b>		
White	799	48.5
Black/ African-American	583	35.4
Asian	46	2.8
American Indian/ Alaskan Native	10	0.6
Native Hawaiian/ Pacific Islander	6	0.4
Two or More Races	60	3.6
Other Race	145	8.8
Hispanic/ Latino	282	16.9
<b>Age Group</b>		
Under 18	15	0.9
18-24	72	4.3
25-44	585	34.7
45-64	633	37.6
65-84	334	19.8
85+	45	2.7
<b>Annual Household Income</b>		
\$0-\$19,999	353	22.9
\$20,000-\$29,999	192	12.5
\$30,000-\$44,999	199	12.9
\$45,000-\$64,999	203	13.2
\$65,000-\$90,000	193	12.5
More than \$90,000	400	26.0
<b>Health Insurance Coverage</b>		
I have insurance and care is usually affordable	975	58.5
I have insurance but it is usually too expensive to get care when I need it	300	18.0
I am NOT currently covered by any health insurance or health plan	290	17.4
Other	51	3.1
Don't Know/ Not Sure	51	3.1

# Primary Data Collection

## 2017 Mecklenburg County CHA Health Opinion Survey: How Residents Perceive Their Community

Residents were asked to describe their community in terms of six categories: access to health care, community living, senior living, economic opportunity, safety and support for those in need. Residents utilized a five point Likert Scale to express how much they agreed or disagreed with a particular statement. For purposes of this report, neutral responses were excluded.

In general, residents had highly favorable opinions on most issues. Nearly 1 in 5 residents rated health care access, senior living, economic opportunity and providing support for those in need as issues for their community (scored as disagree or strongly disagree).

**1**

**My community has good health care**



**56%**

Agree or Strongly Agree

**20%**

Disagree or Strongly Disagree

**2**

**My community is a good place to raise children**



**65%**

Agree or Strongly Agree

**14%**

Disagree or Strongly Disagree

**3**

**My community is a good place to grow old**



**55%**

Agree or Strongly Agree

**21%**

Disagree or Strongly Disagree

**4**

**My community offers economic opportunity**



**44%**

Agree or Strongly Agree

**28%**

Disagree or Strongly Disagree

**5**

**My community is a safe place to live**



**61%**

Agree or Strongly Agree

**17%**

Disagree or Strongly Disagree

**6**

**My community provides help for people during times of need**



**50%**

Agree or Strongly Agree

**21%**

Disagree or Strongly Disagree

# Priority Health Issues





- 
- Access to Care
  - Chronic Disease Prevention
  - Environmental Health
  - Healthy Pregnancy
  - HIV and other STDs
  - Injury
  - Mental Health
  - Substance Use Disorder
  - Violence
  - Communicable Diseases

# Access to Care

Access to timely and quality healthcare services is an important step in promoting community health and reducing disability and premature deaths. Having health insurance is an essential component for access to care. Lack of coverage is associated with poor health status, late entry into medical care, late diagnoses of health conditions and premature deaths. However, even with health insurance, many find care too expensive or encounter other barriers like transportation, language and hours of operation.

## Benchmark

Persons with medical insurance

**Healthy People 2020 Target:** 100% coverage  
**Mecklenburg County, NC:** 88% coverage

Adult Residents (18+)  
of Mecklenburg County

819,512

230,000

Adults without a primary care  
provider  
(BRFSS, 2018)

- Health insurance coverage has improved across the county since implementation of the Affordable Care Act (2013).
- However, **more than 120,000 residents are still uninsured** in Mecklenburg.
- While residents who are employed are more likely to have health insurance coverage, **12% of persons who work full-time are uninsured.**
- Even with health insurance coverage, over 160,000 adults in the county reported not being able to see a doctor due to cost.
- Access to oral health care is a challenge for many residents. **Over 210,000 residents report not being able to see a dentist due to cost.**

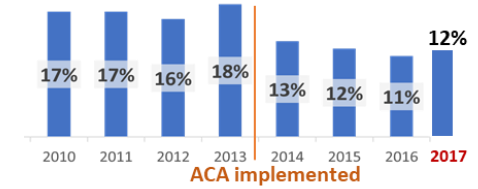
Key  
Facts

## Contributing Factors



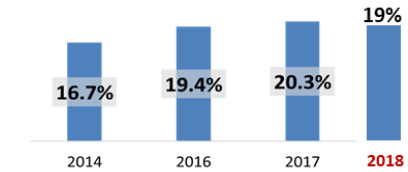
## Trends in Access to Care

### % Without Health Insurance, Mecklenburg



Source: US Census, American Fact Finder

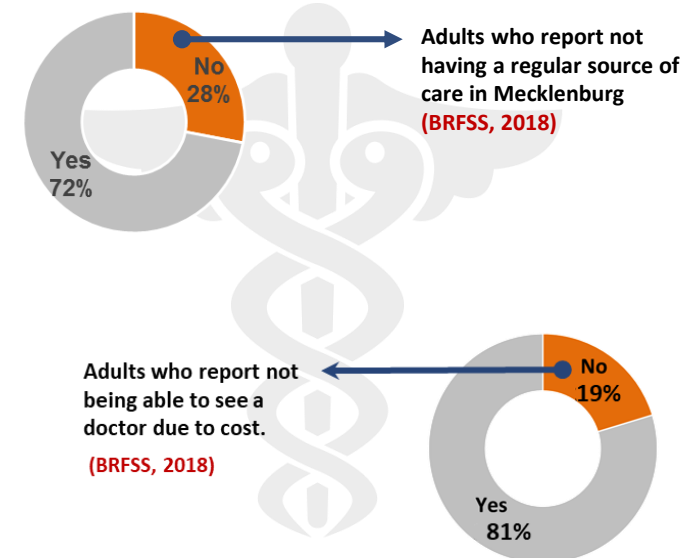
### % Unable to See a Doctor Due to Cost, Mecklenburg



Source: Local Mecklenburg BRFSS

## Access to Regular Source of Care

Persons without a regular source for care are more likely to report delays in preventive care and services which may result in increased illness and deaths.



## Access to Care

### Uninsured Population by Selected Characteristics, Mecklenburg

Total Number of Persons Uninsured in Mecklenburg: 123,306

Age	Total Number Uninsured	% of Population Uninsured
Under 19 yrs.	14,928	5.5%
19 – 64 yrs.	107,254	15.6%
65 and older	1,124	1.0%
<b>Gender</b>		
Male	65,517	12.7%
Female	57,789	10.4%
<b>Work Experience</b>		
Worked full-time	48,655	11.7%
Worked less than full-time	33,628	21.5%

Source: US Census, American FactFinder, 2017

### Healthcare Disparities for Selected Access to Care Indicators (% of Adults Reporting)

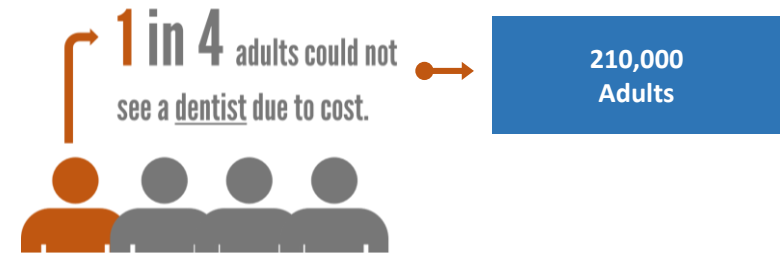
Income Levels	Less than \$50,000	\$50,000 or more
No Health Insurance	(32.2%)	(12.3%)
No Regular Source of Care	(38.2%)	(18.1%)
Unable to See a Doctor due to Cost	(28.8%)	(8.9%)
<b>Education Levels</b>	<b>High School or Less</b>	<b>College</b>
No Health Insurance	(44.1%)	(13.3%)
No Regular Source of Care	(41.5%)	(22.7%)
Unable to See a Doctor due to Cost	(26.3%)	(15.9%)

Source: Local Mecklenburg BRFSS, 2018



### Access to Oral Health Care

Although oral health is critical to overall health, many residents lack access to affordable and regular dental care. Disparities in oral health care are influenced by a person's ability to get and keep dental insurance and limited supply of providers.



Source: Local Mecklenburg BRFSS, 2018

### Ratio of the Population to Dentists

The left hand side of the ratio represents the population served by one dentist (based on equal population distribution).

**Mecklenburg**  
1,480 : 1

**North Carolina**  
1,800 : 1

Source: Robert Wood Johnson, 2019 County Health Rankings

Low income adults (<\$25,000 per year) are **5x more** likely to report not seeing a dentist due to cost compared to persons with higher income levels.

(BRFSS, 2018)

# Chronic Disease Prevention

While Americans are living longer lives, they may not be living healthier lives. Chronic conditions can diminish the quality of life due to disability, dependence on medication, and high costs of medical care. Locally and nationally chronic diseases, such as cancer, diabetes and heart disease, are the leading causes of disability and premature deaths. More than half of all deaths in Mecklenburg are due to chronic conditions.

## Benchmarks

Death rates for all types of cancer

**Healthy People 2020 Target:** 179 per 100,000

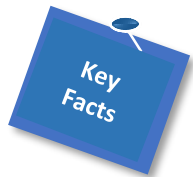
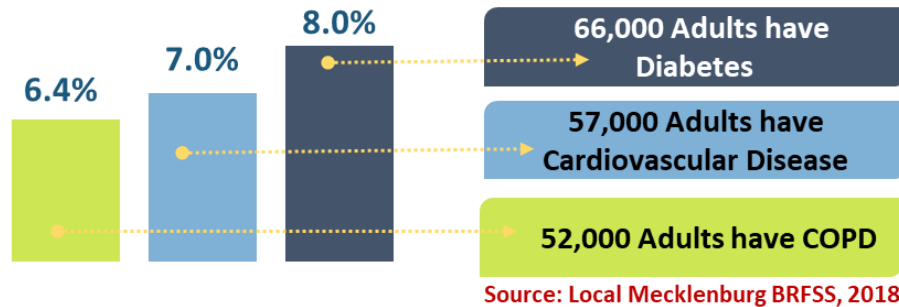
**Mecklenburg County, NC:** 116 per 100,000

Death rate for coronary heart disease

**Healthy People 2020 Target:** 103 per 100,000

**Mecklenburg County, NC:** 105 per 100,000

NC DHHS, Vital Statistics Data, 2017



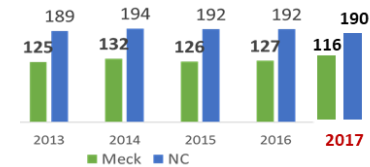
- 23% or **180,000 residents have at least one chronic disease** and another 20% have two or more chronic diseases.
- Cancer death rates in Mecklenburg have remained fairly stable while heart disease death rates have increased slightly.
- The death rate for Alzheimer's Disease is higher in Mecklenburg than in the nation and state.

## Contributing Factors

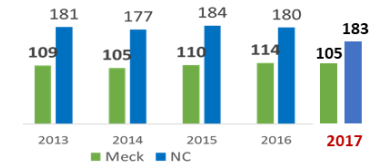


## Trends in Chronic Diseases

### 2013 – 2017 Cancer Death Rate per 100,000 Mecklenburg and NC



### 2013 – 2017 Heart Disease Death Rate per 100,000 Mecklenburg and NC



Source: NC DHHS, Vital Statistics Data

## Modifiable Behaviors

Choosing healthy behaviors may prevent, delay the onset of, or reduce the effect of many chronic conditions. These behaviors include: engaging in regular physical activity, eating nutritious foods and avoiding tobacco.

### Tobacco Use

**14%**

Of adults are smokers



### Lack of Exercise

**20%**

Of adults did not exercise in the past month



Source: Local Mecklenburg BRFSS, 2018

# Chronic Disease Prevention



## Cancer is the leading cause of death in Mecklenburg.

The majority of cancer deaths occur at five sites: colon/rectum, pancreas, lung/bronchus, female breast and prostate.













### Projected New Cancer Cases and Deaths for Mecklenburg County and North Carolina, 2017

Type of Cancer	Mecklenburg County		North Carolina	
	Projected Cases	Projected Deaths	Projected Cases	Projected Deaths
Lung/ Bronchus	706	482	8,888	6,168
Female Breast	924	122	10,279	1,428
Prostate	612	71	7,577	990
Colon/ Rectum	387	136	4,602	1,693
Total Cancers	5,032	1,655	59,345	20,877

Source: NC Central Cancer Registry, 2017

## Health Disparities in Chronic Disease Death Rates

### Race/Gender Disparity Ratios based on Adjusted Death Rates, 2013 - 2017

Chronic Condition	Meck Rate (per 100,000)	Disparity Ratio: By Race	
		Whites	African Americans
Female Breast Cancer	20.8	 1 to 1.4	
Heart Disease	129.9	 1 to 1.4	
Diabetes	17.6	 1 to 3.0	
Chronic Condition	Meck Rate (per 100,000)	Disparity Ratio: By Gender	
		Females	Males
All Cancers	142.7	 1 to 1.3	
Heart Disease	129.9	 1 to 1.7	
Alzheimer's Disease	39.2	 1.4 to 1	

Source: NC State Center for Health Statistics



## Heart Disease and Stroke are the 2<sup>nd</sup> and 4<sup>th</sup> leading causes of death, respectively.

Examples of risk factors for heart disease and stroke include unhealthy weight, elevated cholesterol and high blood pressure.

### 2018 Chronic Conditions and Behavioral Health Risk Factors, Local BRFSS Mecklenburg County

Current Smoking Rates	14%
Overweight/ Obesity Rates	64%
High Blood Pressure	28%
High Cholesterol	29%

(BRFSS, 2018)



## Alzheimer's Disease is the 5<sup>th</sup> leading cause of death and is the most common cause of dementia among older adults.

### 2013 – 2017 Alzheimer's Age Adjusted Death Rates Mecklenburg and NC, (per 100,000)



Source: NC State Center for Health Statistics



# Environmental Health

Environmental health focuses on the relationships between people and their environment. The environment includes everything around you, including the air that you breathe, the water you drink, the places where your food is grown or prepared, the ground below us and the communities in which you live, work and play. When your environment is healthy, you are more likely to stay healthy. When your environment is unhealthy (i.e., exposures to toxic waste, unsafe drinking water supplies, poor air quality, etc.) your health can be negatively affected.

The World Health Organization estimates that 13% of the disease burden in the United States is due to environmental factors such as poor air and water quality and exposure to chemicals. Preventing or controlling disease and injuries related to the interactions between people and their environment is an essential part of improving population health.

## Trends in Environmental Health

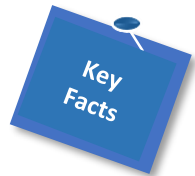
### Air Quality

Mecklenburg Air Quality meets all Federal, Health-based Standards

### Drinking Water

Monitoring sites for Lake Norman and Mountain Island Lake scored 100% of the Lake Use Support Index

Source: Mecklenburg LUESA, 2016 Mecklenburg State of the Environment Report



- Environmental health data indicates that, in general, the air, land and water in Mecklenburg is safe and healthy.
- **Over 75% of streams in Mecklenburg are safe for human contact** compared to only 25% in 1998.
- Urban tree canopy is a priority for the City of Charlotte which has established a plan to achieve 50% tree canopy within the city.

## Contributing Factors



## Childhood Lead Poisonings

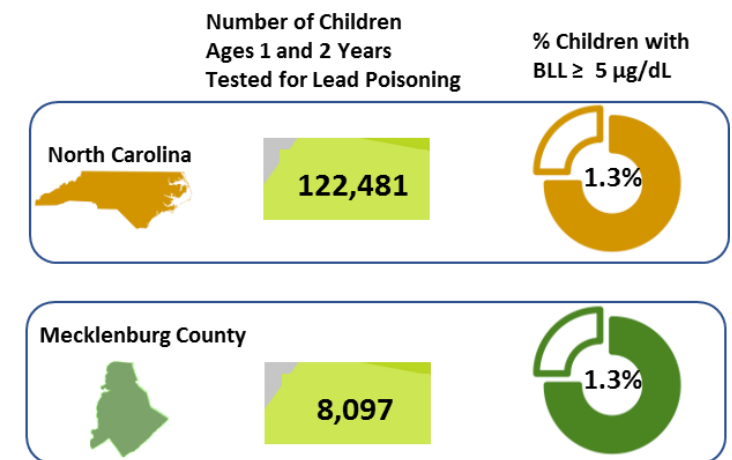
- Lead is a poison that affects every system in the body. Even low exposure to lead (blood lead levels at least as low as 10 µg/dL) in children can cause damage to the brain and nervous system. Higher levels can lead to coma, convulsions and death.

### Effects of Childhood Lead Poisoning



- Childhood lead poisoning is one of the most common pediatric health problems in the United States today and is entirely preventable.

### 2014 NC Childhood Blood Lead Level (BLL) Surveillance Data, North Carolina and Mecklenburg\*



Source: North Carolina Lead Surveillance System

<sup>1</sup> Most current data available online at time of publication

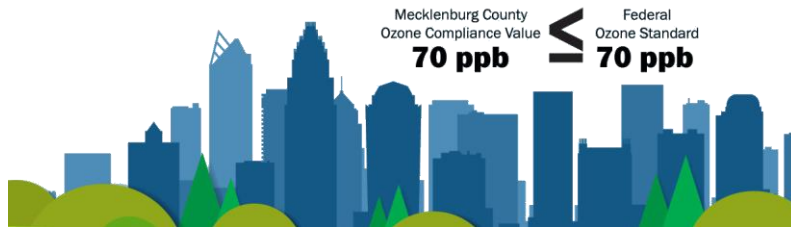
# Air, Land and Water

## Air Quality

Air pollution can complicate conditions like asthma, COPD and heart disease and make it harder for people with these conditions to breathe.

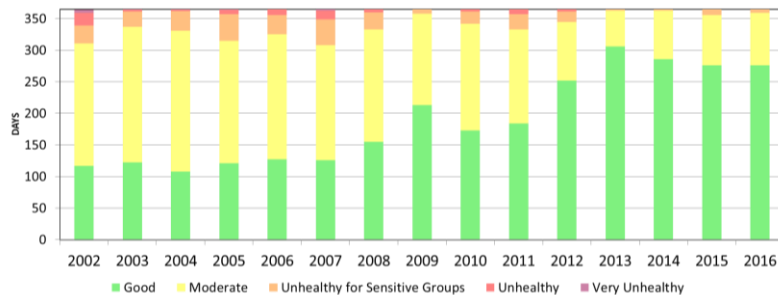
Data/Graphics Source: Mecklenburg County LUESA

### Air Quality in Mecklenburg County Meets All Federal, Health-based Standards



- In general, air quality in Mecklenburg meets federal standards. The number of Good Air Days in the county have doubled since 2004.

### 2002 – 2016 Number of Days by Air Quality Index Mecklenburg County, NC



- Motor vehicles are the major source of urban air pollution. Despite increasing use of motor vehicles in the county, their emissions have dropped over time.

**210,090**

vehicle miles reduced from clean commute campaign

Grants to Replace Aging Diesel Engines brought to Charlotte region since 2007

**\$6.6 million** in grants  
**710 tons** NOx reductions

## Tree Canopy



- Trees improve air quality by removing ozone, carbon monoxide and particulate matter.
- Improving the urban tree canopy can mitigate the adverse health effects of extreme heat events and improve overall quality of life for residents.



## Water Quality

Data/Graphics Source: Mecklenburg County LUESA

- Surface and ground water quality concerns apply to both drinking and recreational waters.
- Lake Norman and Mountain Island Lake provide millions of gallons of drinking water each day to Mecklenburg County residents. In FY16 monitoring sites for both lakes scored 100% of the Lake Use Support Index.
- The discharge of untreated runoff from impervious surfaces has the greatest negative impact to surface water quality. In 2007/2008 Mecklenburg County adopted ordinances to negate the impact of untreated runoffs from new development and redevelopment projects.

## WATER QUALITY IMPROVEMENTS

**375 Total miles of streams**



**300**

Number of stream miles monitored monthly by Storm Water Services for water quality.

# Healthy Pregnancy

A healthy pregnancy is one of the best ways to promote healthy birth outcomes. Getting early and regular prenatal care is an important step in protecting the health of mother and child. Avoiding tobacco, eating healthy and being physical active also contribute to a healthy pregnancy.

## Benchmarks

% of Low Birth Weight infants  
(less than 2500 grams)

**Healthy People 2020 Target:** 7.8%  
**Mecklenburg County, NC:** 9.7%

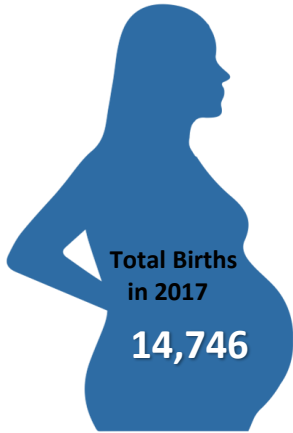
Total Preterm Births  
(before 37 weeks of pregnancy)

**Healthy People 2020 Target:** 11.4%  
**Mecklenburg County, NC:** 12.5%

Infant Death Rate  
(infant deaths per 1,000 births)

**Healthy People 2020 Target:** 6.0 per 1,000  
**Mecklenburg County, NC:** 4.8 per 1,000

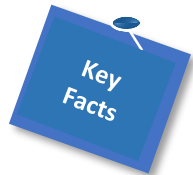
Source: NC DHHS State Center for Health Statistics 2017



Nearly **1 in 10** infants were born premature



Nearly **1 in 10** infants were low birth weight



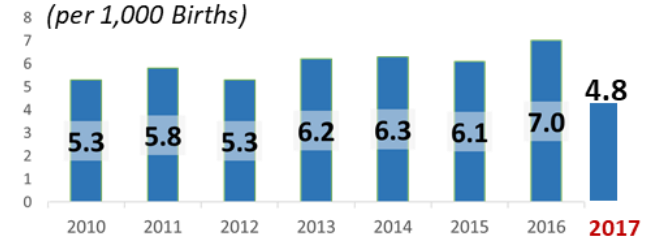
- **Teen pregnancies have declined by 60% since 2000.**
- The number of infants dying before their first birthday has declined over time in Mecklenburg.
- Infant death rates vary greatly by race. **African American infants are 5 times more likely to die during their first year of life than are White infants.**

## Contributing Factors

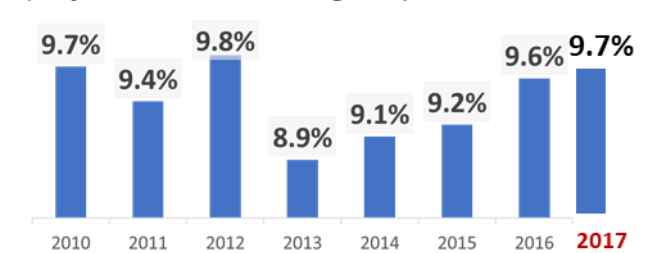


## Trends in Healthy Pregnancy Data

### 2010 – 2017 Infant Death Rates, Mecklenburg



### 2010 – 2017 Low Birth Weight Infants, Mecklenburg

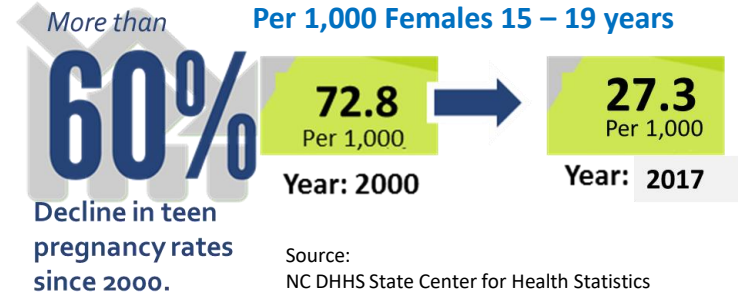


Source: NC DHHS State Center for Health Statistics

## Teen Pregnancies and Births

Becoming a teen mom affects the health and economic opportunities of both mother and child. In Mecklenburg, teen births and pregnancy rates have declined dramatically. In 2017 only 4.4% of all births (655 births) were to teens 15 – 19 yrs.

### Teen Pregnancy Rates, Mecklenburg



# Healthy Pregnancy

## Preconception Health

Preconception health is a broad term that focuses on things women can do before and between pregnancies to increase the chances of having a healthy baby.

## Risks for Maternal and Infant Complications

- Uncontrolled chronic conditions, such as hypertension and diabetes, can cause problems during pregnancy for women and their developing babies.
- Mothers who smoke or drink alcohol during pregnancy are more likely to have preterm births and low birthweight babies.
- Mothers who are underweight or overweight/obese also have a greater risk of complications during pregnancies.

### 2017 Preconception Health Data, Mecklenburg

Pre-existing conditions (among mothers giving birth)	Total Births	% of all Births
Underweight	500	3.4%
Overweight/Obese	6,762	45.9%
Gestational Hypertension	1,172	7.9%
Gestational Diabetes	1,120	7.6%

## Preterm Births

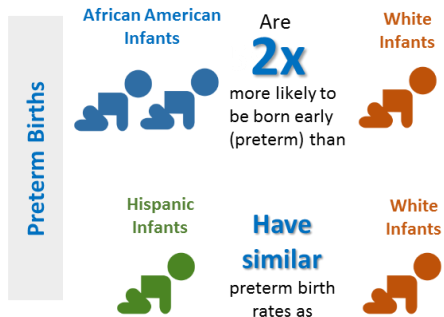
Preterm birth is when a baby is born too early, (before 37 weeks of pregnancy) and is the leading cause of newborn death in the United States. Even babies born just a few weeks early have higher rates of sickness and hospitalizations than full-term infants. Infant deaths are higher for babies born without adequate prenatal care. In 2016, preterm birth affected nearly 1 of every 10 infants born in Mecklenburg.

### Prenatal Care



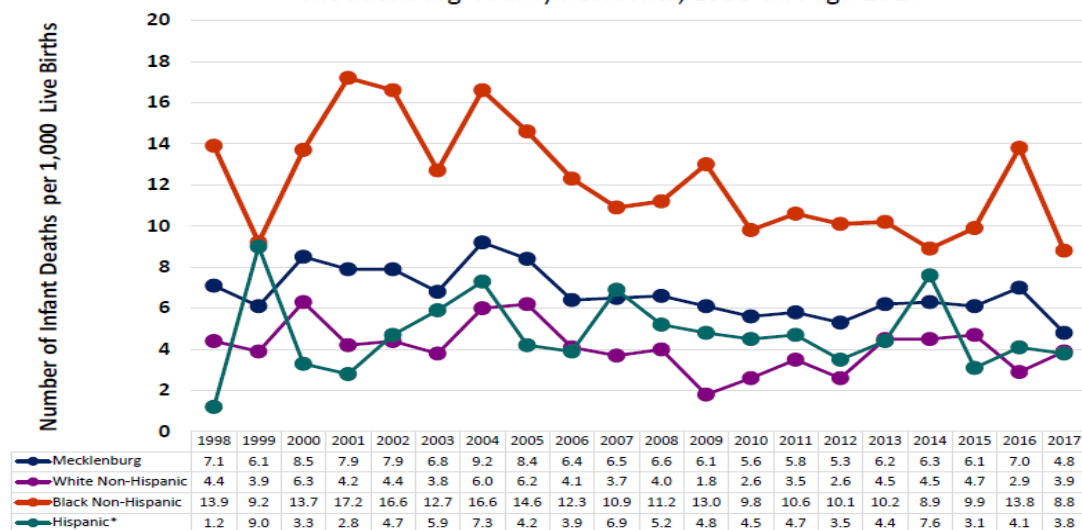
**1 in 5** mothers in Mecklenburg report Inadequate Levels of Prenatal Care.

Source: NC DHHS, 2019 County Health Data Book



## Health Disparities in Infant Death Rates

Annual Infant Mortality Rates by Race and Ethnicity  
Mecklenburg County Residents, 1998 through 2017



Source: NC DHHS/State Center for Health Statistics  
Prepared by Mecklenburg County Public Health, Epidemiology, April 15 2019

# HIV & Other Sexually Transmitted Diseases

HIV, human immunodeficiency virus, and other sexually transmitted diseases (STDs) are serious public health problems across the United States. More than 12 million Americans are infected with STDs each year and nearly 40,000 new cases of HIV are reported annually.

## Benchmarks

Reduce Primary and Secondary Syphilis among females (per 100,000 females)

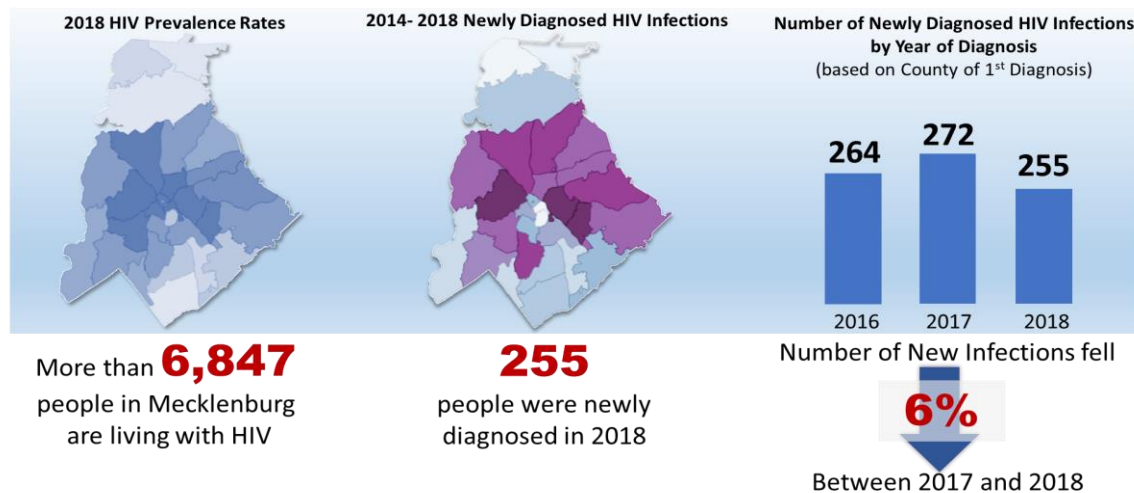
**Healthy People 2020 Target:** 1.3 cases per 100,000  
**Mecklenburg County, NC:** 3.8 cases per 100,000

Reduce Primary and Secondary Syphilis among males (per 100,000 males)

**Healthy People 2020 Target:** 6.7 cases per 100,000  
**Mecklenburg County, NC:** 56.5 cases per 100,000

Reduce deaths from HIV Infection (per 100,000 population)

**Healthy People 2020 Target:** 3.3 deaths per 100,000  
**Mecklenburg County, NC:** 3.1 deaths per 100,000



- STDs, such as chlamydia, gonorrhea and syphilis are increasing in the county. **The number of Syphilis diagnoses nearly doubled between 2014 and 2018.**
- HIV infections in Mecklenburg have stabilized and the number of new diagnoses have **declined by 6% between 2017 and 2018.**
- **Each year 250 – 300 new HIV infections are reported** adding to the growing number of people living with HIV in the county.

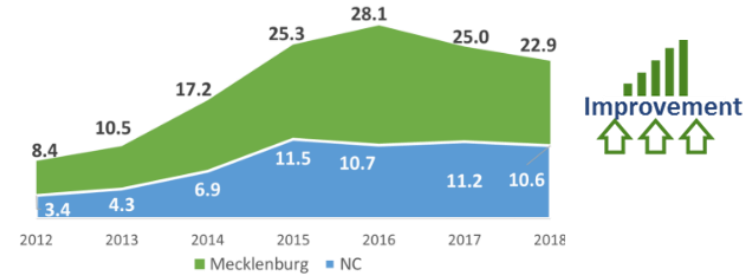
## Contributing Factors



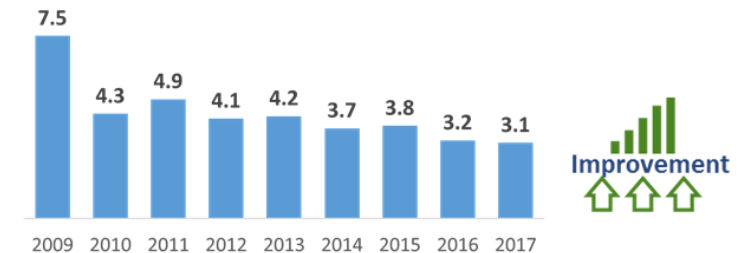
## Trends in HIV and STDs Data

## Progress

**2012 – 2018 Primary/Secondary Syphilis Mecklenburg and NC (per 100,000)**



**2009 – 2017 HIV Death Rates, Mecklenburg (per 100,000)**



## STDs on the rise

Chlamydia, gonorrhea and syphilis rates across the nation and the county are increasing. Syphilis diagnoses in Mecklenburg, have seen the most dramatic increase having more than doubled in numbers between 2014 and 2016.

**Between 2014 & 2018 Mecklenburg STD rates increased by:**

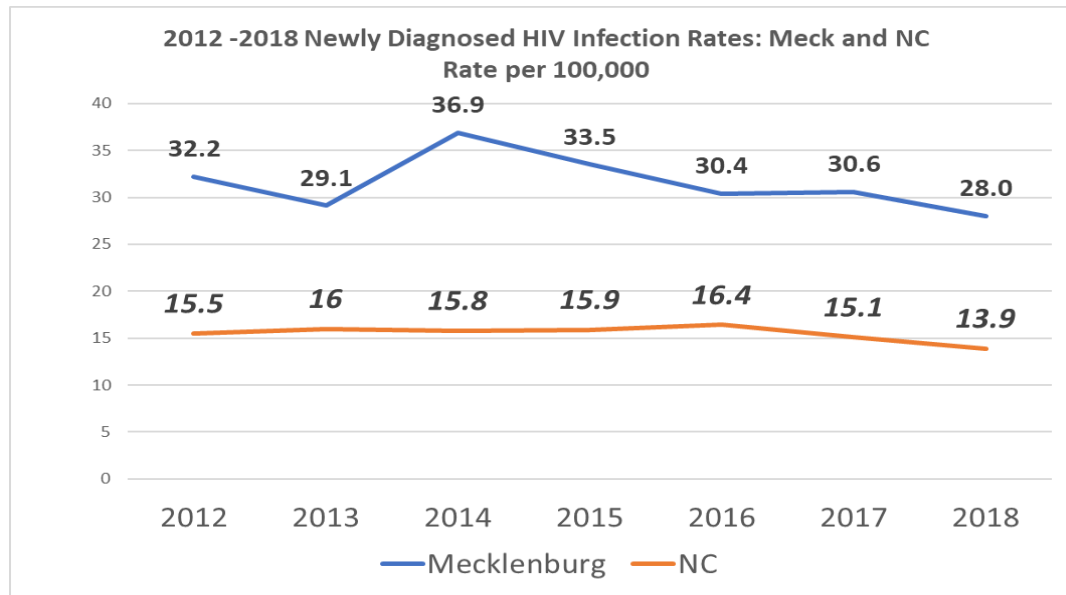




# HIV & Other Sexually Transmitted Diseases

## Snapshot of HIV/AIDS in Mecklenburg

While other STDs have increased over time, HIV diagnoses and case rates have stabilized in the county. HIV infection case rates among adolescents and adults declined 24% between 2014 and 2018. However, each year an average of 250 – 300 new infections are reported in the county, adding to the growing number of persons who are living with HIV in Mecklenburg.

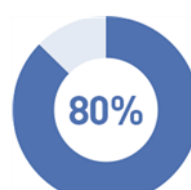


## Health Disparities in HIV/AIDS

**The Face of HIV in Mecklenburg County**  
Based on 2018 New HIV Diagnoses n = 255



are  
African American



are  
Males



## STDs in Young Adults

More than 50% of the 20 million STDs reported in the United States occur among persons ages 15 – 24 years.

### Sexual Health Behaviors in High School, Mecklenburg

Source: Charlotte-Mecklenburg Youth Risk Behavior Survey, 2017

Of High School  
Students:

**38%**

Have ever  
had sex

**25%**

Are currently  
sexually active

### Young Adults (20 – 24 yrs) with STDs, Mecklenburg

Source: NC DHHS, HIV/STD Surveillance Data Mecklenburg County



**Chlamydia**

**9,204 cases**  
Reported in 2018

**Nearly 2 out of 5**  
are young people aged  
20 - 24 years.



**Gonorrhea**

**3,193 cases**  
Reported in 2018

**Nearly 1 out of 3**  
are young people aged  
20 - 24 years.



**Early Syphilis**

**427 cases**  
Reported in 2018

**Nearly 1 out of 5**  
are young people aged  
20 - 24 years.

# Injury

Unintentional injuries refers to injuries that are unplanned. They are both predictable and preventable in nature. The most common types are motor vehicle crashes, falls, fires, drownings and poisonings. In the nation, unintentional injuries are the leading causes of deaths for persons age 1 – 44 years. Deaths, however, are just the tip of the iceberg. Millions of people who are injured survive and face life-long mental, physical, and financial problems.

## Benchmarks

Reduce Motor Vehicle Crash-related deaths (deaths per 100,000)

**Healthy People 2020 Target:** 12.4 deaths per 100,000  
**Mecklenburg County, NC:** 9.3 deaths per 100,000

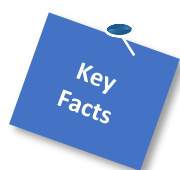
Prevent an increase in poisoning deaths (deaths per 100,000)

**Healthy People 2020 Target:** 13.2 deaths per 100,000  
**Mecklenburg County, NC:** 18.4 deaths per 100,000



In 2017, Unintentional Injury was the 3<sup>rd</sup> Leading Cause of Death in Mecklenburg

Source: NC DHHS Vital Statistics Data, Mecklenburg



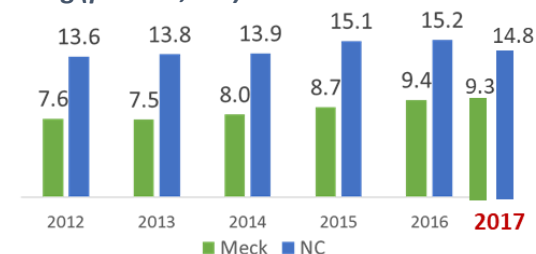
- During 2017, **Unintentional Injuries were the 3<sup>rd</sup> leading cause of death** in Mecklenburg.
- Deaths due to Motor Vehicle Crashes have increased over time.

## Contributing Factors

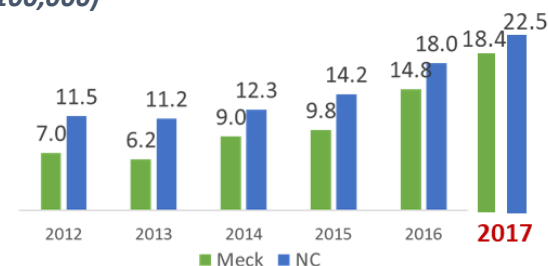


## Trends in Injury Data

**2012 – 2017 Deaths due to Motor Vehicle Crashes, Mecklenburg (per 100,000)**



**2012 – 2017 Deaths due to Accidental Poisoning (per 100,000)**



Source: NC DHHS Vital Statistics Data, Mecklenburg

## 2016 Leading Causes of Death due to Unintentional Injuries, Mecklenburg – Total Deaths: 272

	Number of Deaths	% of Deaths
• Accidental Poisoning	156	42.0%
• Motor Vehicle Injuries	99	26.7%
• Falls	51	13.7%
• Suffocation	20	5.4%
• Accidental exposure to other specific factors	14	3.8%

# Injury

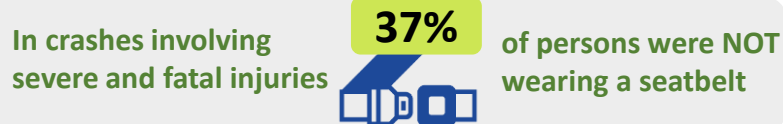
## Motor Vehicle Crashes

In the United States, more than 32,000 people are killed and 2 million are injured each year from motor vehicle crashes. According to the Centers for Disease Control, 1 in 3 crash deaths in the US involved drunk driving, and almost 1 in 3 involved speeding.

In Mecklenburg, death rates for motor vehicle crashes increased by 24%, from 7.6 deaths per 100,000 in 2012 to 9.4 in 2016.



Source: NC Department of Transportation, Crash database



Source: 2016 Carolinas Healthcare System Trauma Data

## Pedestrians and Cyclists Struck by Vehicles

The Centers for Disease Control estimates that pedestrians are 1.5 times more likely than passenger vehicle occupants to be killed in a car crash on each trip.

During 2016, in the City of Charlotte there were:



Source: City of Charlotte Traffic Report, 2016 data

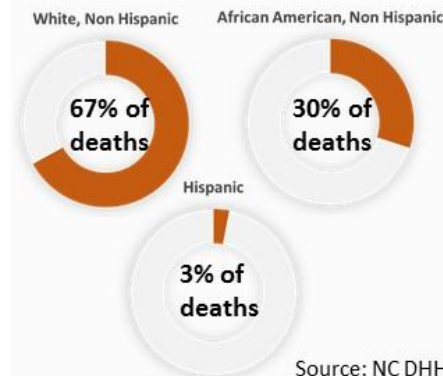
## Accidental Poisonings

Accidental poisonings are the leading cause of Unintentional Injury deaths in Mecklenburg. Over time accidental poisoning deaths have increased in the county. In 2016, opioid abuse accounted for 74% of all accidental poisoning deaths. Additional data on opioid abuse can be found in the Substance Use Disorder section.

**In 2016, there were 156 deaths due to Accidental Poisonings in Mecklenburg.**

Accidental poisoning deaths were most common among White residents

Most people who died of accidental poisoning were men



Source: NC DHHS, Vital Statistics, 2016 Mecklenburg

## Falls in Seniors (Persons 65 years and older)

In the United States falls account for nearly 475,000 hospital admissions annually and for 68% of all injury-related hospitalizations in patients age 65 years and older.

**FALLS**



are *the leading cause* of Mecklenburg County Emergency Room Visits

Source: Carolinas Healthcare System Trauma data

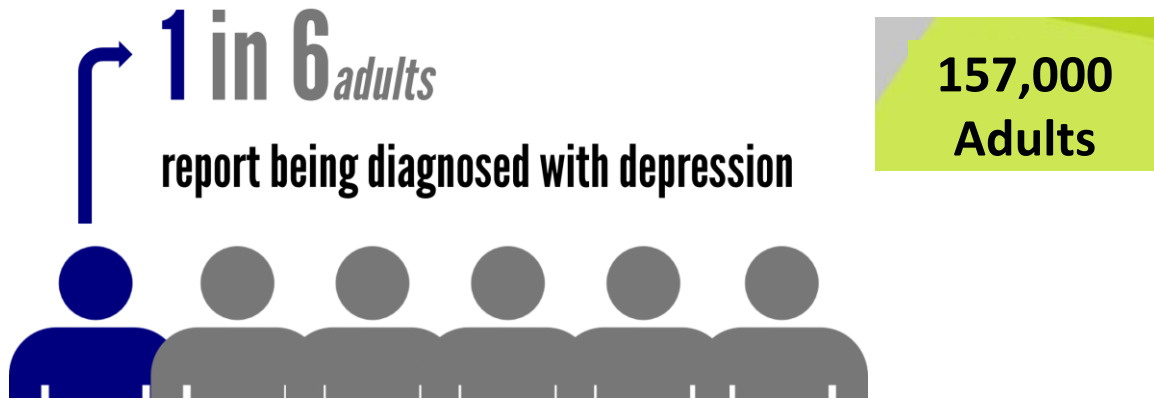
# Mental Health

Mental health is fundamental to total health and problems with mental health are common. An estimated 50% of all Americans will be diagnosed with a mental illness or disorder at some point in their lifetime. Mental illness, especially depression, increases the risk for many types of physical health problems such as stroke, diabetes and heart disease. According to the National Institute of Mental Health, nearly half of all Americans with a severe mental illness do not seek treatment. Stigma and cost are two of the major barriers to care.

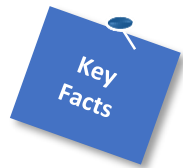
## Benchmarks

Reduce the suicide rate (deaths per 100,000)

**Healthy People 2020 Target:** 10.2 deaths per 100,000  
**Mecklenburg County, NC:** 10.8 deaths per 100,000



Source: Mecklenburg Local Behavior Risk Factor Surveillance Survey, 2018



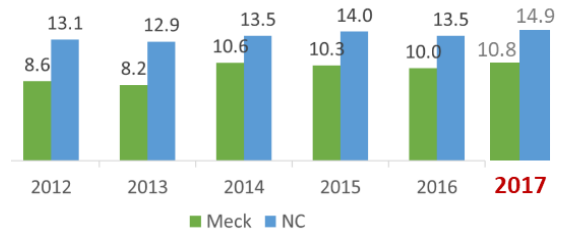
- Mental Health remains a serious health problem for Mecklenburg residents. In 2018, **over 157,000 adults reported being diagnosed having depression.**
- **Nearly 1 in 3 high school students** in Mecklenburg reported being so sad almost every day for two weeks or more in a row that they stopped doing some activity.
- In Mecklenburg, **an average 37 years of potential life was lost due to suicide.** Suicide rates vary by both race and gender in the county, with whites and males having the highest rates of death

## Contributing Factors



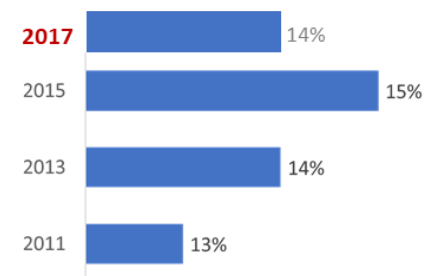
## Trends in Mental Health Data

**2012 – 2017 Suicides, Mecklenburg and NC**  
 (deaths per 100,000)



Source: NC DHHS Vital Statistics Data, Mecklenburg

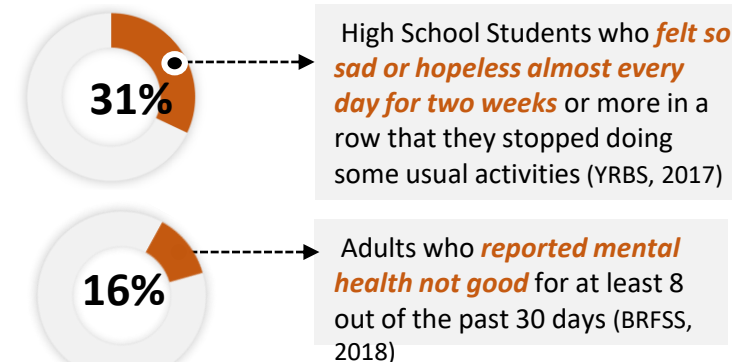
**2011 – 2017 % of High School Students reporting Making a Suicide Plan, Mecklenburg**



Source: Charlotte-Mecklenburg Youth Risk Behavior Survey

## Mental Health Days

Mental health and physical health are closely connected. Mental illnesses, such as depression and anxiety, affect people's ability to participate in health-promoting behaviors.



# Mental Health

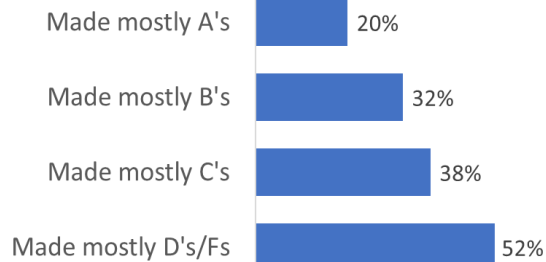
## Mental Health and Educational Achievement

The start of many mental health conditions occurs in adolescence and can affect school performance. The Substance Abuse and Mental Health Services Administration (SAMHSA) estimates that 50% of lifetime cases of mental illness begin by age 14.

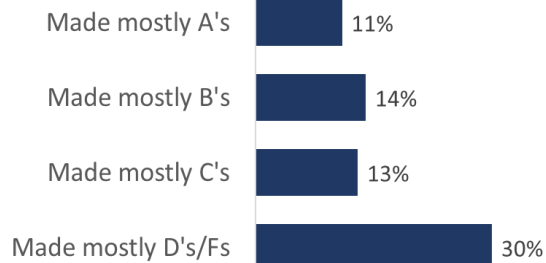
### 2017 Youth Risk Behavior Survey, Mecklenburg

#### % of Students with Mental Health Problems and Scholastic Achievement

High School Students who felt sad or hopeless almost every day for 2 or more weeks in a row that they stopped doing usual activities



High School Students who made a plan about how they would attempt suicide



Source: Mecklenburg County Youth Risk Behavior Survey, 2017

## Bullying and Mental Health

Bullying is unwanted, aggressive behavior among school-aged children that involves a real or perceived threat. The behavior is repeated, or has the potential to be repeated, over time. Youth who report bullying others and youth who report being bullied have an increased risk for depression, anxiety and suicide-related behavior.

### % High School Students who have been bullied on school property in the past 12 months

	2011	2013	2015	2017
Meck	19%	16%	17%	17%
NC	21%	19%	16%	19%

Source: Charlotte-Mecklenburg Youth Risk Behavior Survey, 2015

## Suicides

Suicide is a serious and preventable public health problem that can have lasting harmful effects on individuals, families and communities. Suicides can occur throughout the lifespan. In the United States it is the 10<sup>th</sup> leading cause of death (CDC, 2015).

### 2016 Suicides By Cause, Mecklenburg Total Deaths = 105

Causes of Suicide	Total Deaths	% of Deaths
1. Firearms	51	48.6%
2. Strangulation/Hangings/Suffocation	29	27.6%
3. Self Poisoning	15	14.3%
4. All other causes of Suicides	10	9.5%

### In 2016

Suicide is the **3<sup>rd</sup>** Leading Cause of Death for ages 15 – 24 yrs

**37**  
years

Source: NC DHHS, Vital Statistics

Average years of potential life lost (YPPL) due to suicide in Mecklenburg between 2012- 2016.

## Health Disparities in Suicides: 2012- 2016 Age-Adjusted Data

Suicide affects everyone, but some groups are at higher risk than others. White residents are more likely to commit suicide than racial and ethnic minorities. Although females are more likely to attempt suicide, males are more likely to commit suicide. One reason for this gender disparity is the use of more lethal methods of suicide among males (i.e., firearms).

	Number of Suicide Deaths	Death Rate (per 100,000)	Disparity Ratios
Whites	354	13.2	   African Americans      Whites
African Americans	95	5.8	
Males	347	15.1	   Females      Males
Females	136	5.0	

Source: NC DHHS, Vital Statistics



# Substance Use Disorder

Millions of adolescents and adults are impacted by substance use disorders in the United States. According to the Substance Abuse and Mental Health Administration (SAMHSA), illicit drug use among Americans aged 12 and older has increased over time. In 2002, 8.3% reported using an illicit drug in the past month compared to 10.2% who reported using in 2014. While marijuana is the most commonly used drug, the misuse of prescription drugs is contributing to increases in opioid overdoses. Social attitudes and political and legal responses to alcohol and illicit drugs make substance use disorder one of the most complex public health issues.

## Benchmarks

Reduce % of youth who reported binge drinking (5 or more drinks in a short time) in the past month

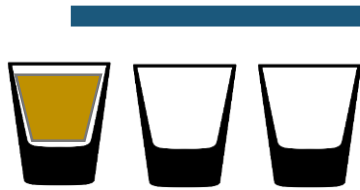
**Healthy People 2020 Target:** 8.6%  
**Mecklenburg County, NC:** 11.0%

Reduce % of youth who used marijuana in the past month

**Healthy People 2020 Target:** 6.0%  
**Mecklenburg County, NC:** 21.0%

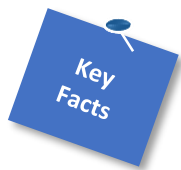
Reduce % of persons binge drinking during the past 30 days—adults aged 18 years and older

**Healthy People 2020 Target:** 24.2%  
**Mecklenburg County, NC:** 36.7%



**1 in 3** High School Students  
had alcohol in the past 30 days

Source: Charlotte-Mecklenburg Youth Risk Behavior Survey, 2015

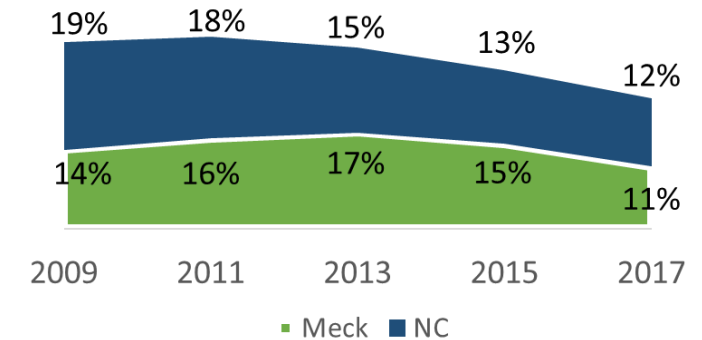


- Rates of binge drinking among youth have improved while rates among adults have remained stable.
- Marijuana use among youth has declined, however **nearly 1 in 4 high school students** reported using the drug in the past month.
- Between 2012 and 2017, **there was a 127% increase in ER visits due to opioids**. Opioid death rates increased by 20% between 2015 and 2016.

## Contributing Factors

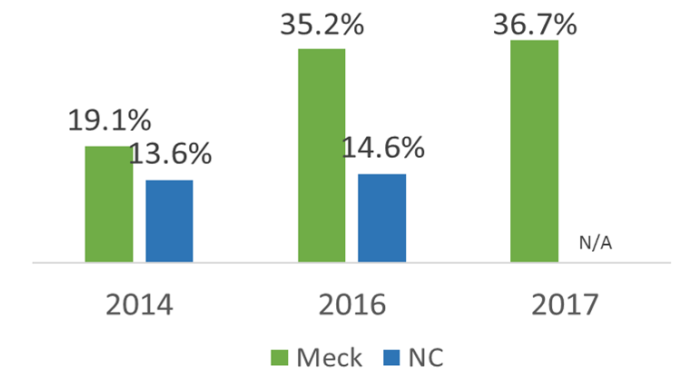


2009 – 2017 % of High School Students reporting Binge Drinking, Mecklenburg and NC



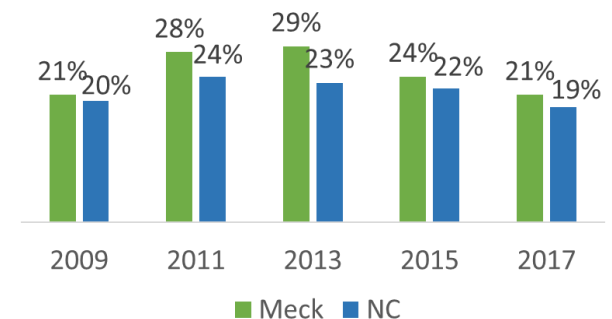
Source: Charlotte-Mecklenburg Youth Risk Behavior Survey

2014 – 2017 % of Adults Binge Drinking, Mecklenburg and NC



Source: Behavioral Risk Factor Surveillance System

2009 – 2017 % of High School Students Reporting Marijuana Use in the Past Month, Mecklenburg and NC



Source: Charlotte-Mecklenburg Youth Risk Behavior Survey

# Substance Use Disorder

## Opioid Overdose

Drug overdose deaths and opioid-involved deaths are an increasing public health threat. According to the Centers for Disease Control, on average 115 Americans die every day from an opioid overdose. The amount of prescriptions sold and the subsequent misuse of prescription opioids are a driving factor for this epidemic.

2012 - 2017 (YTD) Opioid Overdose ED Visits, Mecklenburg  
(Number of Visits)

Source: NC DETECT, ED Visits, Mecklenburg

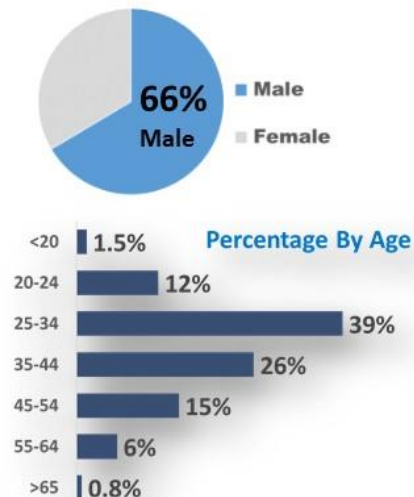


## Disparities in Opioid ED Visits in Mecklenburg

Source: NC DETECT ED Visits, Mecklenburg County

Opioid related Emergency Department visits are higher among Males and persons aged 25 – 34 years. Whites have higher rates of opioid related ED visits than do any other racial/ethnic group. Geographic variations also exist for opioid use.

2016 ED Visits Due to Opioid Overdose  
by Gender and Age, Mecklenburg



Top 12 Zip Codes Reporting ED Visits Due to  
Opioid Overdose in 2016



## Deaths due to Opioids

In 2016, there were 121 deaths due to opioids in Mecklenburg resulting in a rate of 11.5 deaths per 100,000 population. This rate was 20% higher than that of the previous year (2015 rate = 9.6).

In 2016

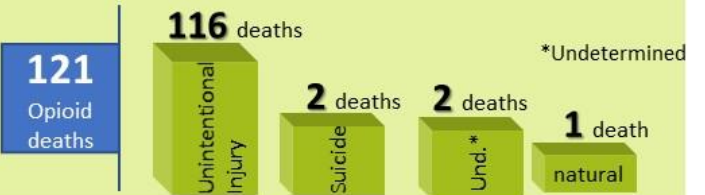
166 deaths were due to Drug Overdose in Mecklenburg.

7 out of 10  
of these deaths  
involved opioids



Source: NC DHHS, Vital Statistics

Total Opioid Deaths in Mecklenburg By Cause (2016)



## Alcohol Use and Abuse in Youth

Source: 2016 Charlotte Mecklenburg Drug Free Coalition, Indicators Report

Underage drinking is a serious problem, both nationally and locally. Early use of alcohol increases a youth's risk for exposure to violence, use of other illicit drugs and academic difficulties.

84%

Youth believe  
binge drinking is a  
risky behavior

And YET

1 In 8

High School Students reported  
Binge Drinking in the past month



# Violence Prevention

Violence is a serious problem, both nationally and locally. It affects all age ranges and types of people causing death, injury and disability. The different forms of violence—child abuse and neglect, youth violence, intimate partner violence, sexual violence, elder abuse and suicidal behavior—are interconnected and often share the same root causes. In 2016, more than 19,000 Americans were victims of homicide and placing it among the top 15 leading causes of death in the nation.

## Benchmarks

Reduce Homicides

**Healthy People 2020 Target:** 5.5 deaths per 100,000

**Mecklenburg County, NC:** 8.5 deaths per 100,000

Reduce bullying among adolescents

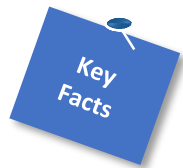
**Healthy People 2020 Target:** 17.9% among adolescents

**Mecklenburg County, NC:** 17.0% among adolescents



**In 2016,**  
**Nearly 4 out of 5 homicides**  
were committed by firearms.

Source: NC DHHS, Vital Statistics Mecklenburg County Data

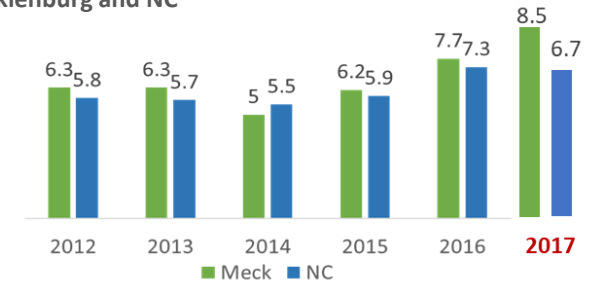


- While bullying rates on school property have remained relatively stable, **50% of students still believe it to be a problem on school grounds.**
- Homicide rates in Mecklenburg have **increased 70%** between 2014 and 2017.
- In 2017, homicide was **the 2<sup>nd</sup> leading cause of death for persons aged 15 -24 years.**

## Contributing Factors

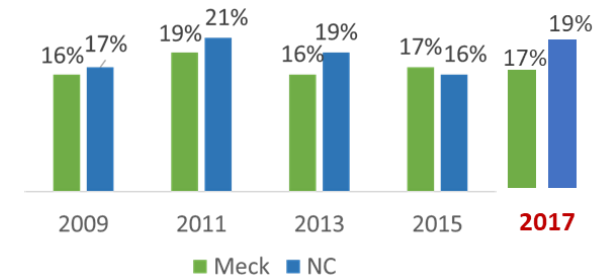


## 2012 – 2017 Homicide Death Rate per 100,000 Mecklenburg and NC



Source: NC DHHS, Vital Statistics Data

## 2009 – 2017 % of High School Students Bullied on School Property in the past 12 months, Mecklenburg



Source: Charlotte-Mecklenburg Youth Risk Behavior Survey

## Intimate Partner Violence (IPV)

IPV refers to physical, sexual, or psychological harm by a current or former partner or spouse. The National Intimate Partner and Sexual Violence Survey (NISVS) indicates that nearly 1 in 4 adult women and 1 in 7 men in the U.S. report having experienced severe physical violence from an intimate partner in their lifetime. In FY2016, Charlotte Mecklenburg Police reported that 1 in 5 service calls were due to Domestic Violence.

**Nearly 1 in 10** teens reported being physically hurt by their partner

Source: Charlotte-Mecklenburg Youth Risk Behavior Survey, 2017



# Violence Prevention

## Bullying and Cyberbullying

The Centers for Disease Control defines bullying as any unwanted aggressive behavior(s) by another youth or group of youths, who are not siblings or current dating partners, involving an observed or perceived power imbalance. Cyberbullying is bullying that happens through technological devices and mechanisms such as email, instant message, text message, social media and other digital applications.

17%

Students who reported being bullied on school property

48%

Students who have seen other students being bullied in their school in the past month

14%

Students who reported being cyberbullied

12%

Teens who were bullied because someone thought they were gay, lesbian or bisexual

## Teen Violence

Teen violence refers to harmful behaviors that can start early in life and continue into adulthood. Teens can be a victim, an offender, or a witness to the violence. Violent acts can include bullying, fighting or use of weapons such as guns or knives.



**Nearly 1 in 8** students reported carrying a weapon to school in the past month



**Nearly**

**1 in 4** students reported being in a physical fight in the past month



**12% or nearly 1 in 8** students did not go to school because they felt unsafe at school or on their way to or from school in the past month

Source: Charlotte-Mecklenburg Youth Risk Behavior Survey, 2017

## Homicides

Prevention of violent deaths is an important goal in promoting population health. In recent years, the number and rate of homicides in Mecklenburg has increased.



The rate of homicides in Mecklenburg increased by 70% between 2014 & 2017.



In 2016, homicides were the **2<sup>nd</sup> Leading Cause of Death for persons aged 15 – 24 years.**

## 2013 – 2017 Age-Adjusted Death Rates, Mecklenburg

	Number of Homicide Deaths	Death Rate (per 100,000)	Disparity Ratios
Whites	47	1.9	 African Americans
African Americans	264	15.0	
Males	284	10.9	 Females
Females	65	2.4	

Source: NC State Center for Health Statistics, 2019 County Health Databook

## 2016 Deaths due to Homicide by Cause, Mecklenburg

Source: NC DHHS, Vital Statistics

Homicides Total Deaths = 81		
Causes of Homicides	Total Deaths	% of Deaths
1. Firearms	64	79.0%
2. Sharp Objects	7	8.6%
3. Strangulations/Hangings/Suffocations	3	3.7%
4. All Other Causes of Homicide	7	8.6%



# Communicable Diseases

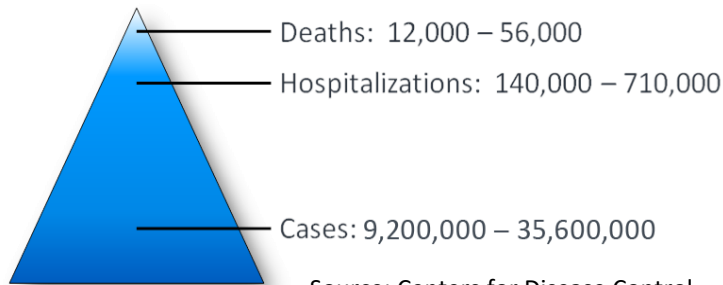
A communicable disease is one that spreads from person to person through a variety of means including: contact with blood and bodily fluids; breathing in an airborne virus; or by being bitten by an insect. Public health infrastructure to address communicable diseases is fairly strong with low rates of cases reported annually. Due to program successes and strong public health response to outbreaks, communicable disease was not included as a priority focus area for the county. However, increases in vaccine-preventable diseases linked to reduced immunization rates as well as sporadic outbreaks of food borne illness underscore the need for continued investment in this public health institution.

## Benchmarks

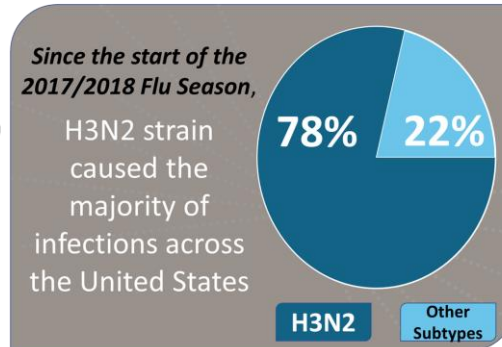
Increase the % of Adults vaccinated against the flu

**Healthy People 2020 Target:** 70.0%  
**Mecklenburg County, NC:** 29.3%

Since 2010, CDC estimates that each year influenza has resulted in:

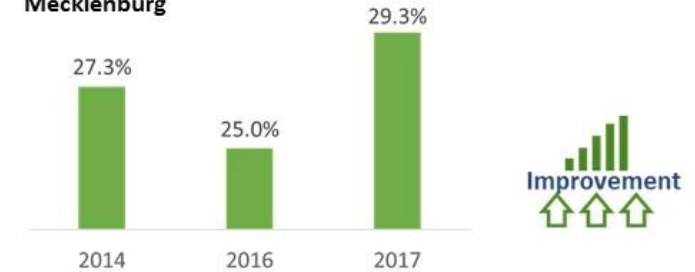


Source: Centers for Disease Control



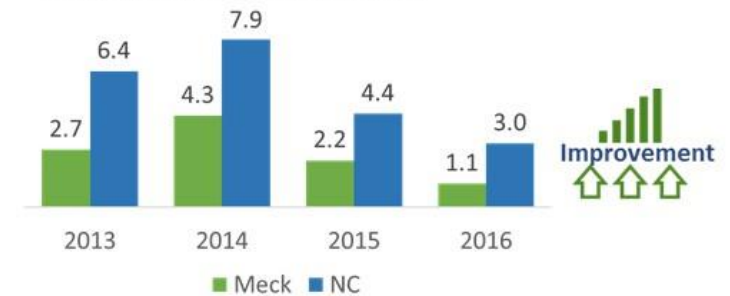
## Trends in Communicable Diseases Progress

**2014 – 2017 % of Adults Receiving Flu Vaccine, Mecklenburg**



Source: Local Mecklenburg Behavior Risk Factor Surveillance System

**2013 – 2016 Reported Pertussis Case Rates, Mecklenburg and NC (per 100,000)**



Source: MCPH, Communicable Disease Program

## Influenza (Flu)

Influenza places a substantial burden on the health of people in the state. As of February 2018, North Carolina has reported 200 influenza associated deaths since the start of the 2017/2018 Flu Season.

**200**

North Carolina Influenza Deaths  
 (starting in October 2017)

Source: NC Communicable Disease Program, Influenza Surveillance

## Key Facts

- Rates of vaccine preventable diseases remain relatively low in Mecklenburg. However, **between 2013 and 2016 the number of reported mumps cases increased from 1 case to 16 reported cases.**
- Tuberculosis case rates have dramatically declined in the county.
- Since the start of the 2017/2018 Flu Season, 200 influenza-associated deaths have been reported in North Carolina (as of 2/18/2018).

## Contributing Factors

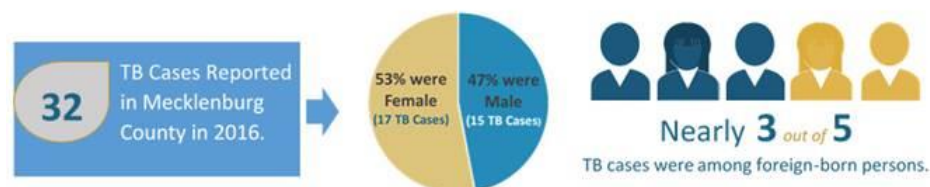




# Communicable Diseases

## Tuberculosis

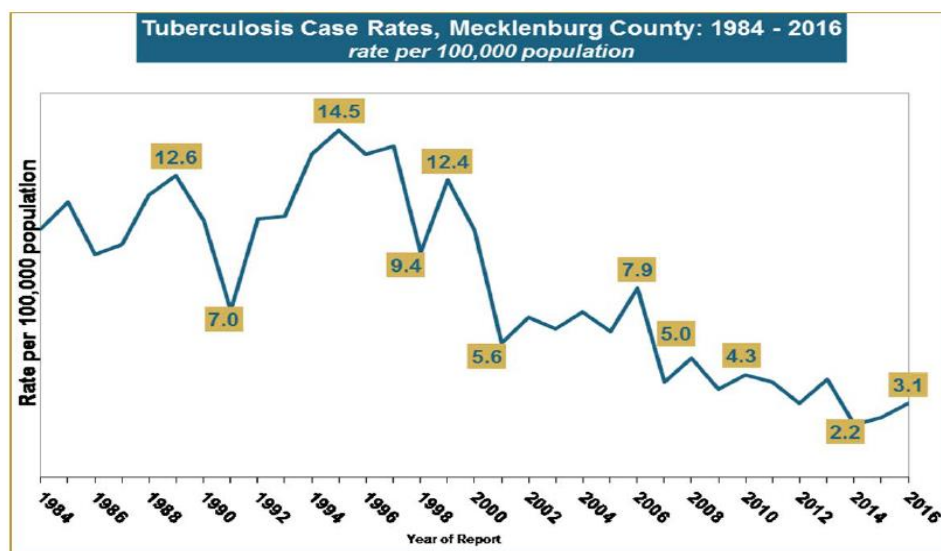
Tuberculosis (TB) is a disease caused by the *Mycobacterium tuberculosis* bacteria. The bacteria usually attacks the lungs, but TB bacteria can attack any part of the body such as the kidney, spine and brain. If not treated properly, TB disease can be fatal. TB case rates in Mecklenburg have declined dramatically.



## TB Can Happen to Anyone...

TB is spread through the air from one person to another. Anyone near the sick person with TB disease can breathe TB germs into their lungs.

Based on 2014 – 2016 data, TB case rates were:



Source: MCPH Tuberculosis Program

## Vaccine Preventable Disease

Rates of most vaccine-preventable diseases (VPDs) are at record low levels in the nation. However, as vaccination coverage for these diseases drops across the country, more outbreaks of measles, mumps and other VPDs continue to happen. Preventing VPD outbreaks requires the consistent and coordinated efforts of public health agencies and healthcare providers to rapidly identify and report suspected cases and swiftly implement control measures.

### 2013-2016 Select Vaccine Preventable Disease, Mecklenburg

Source: MCHD Communicable Disease Program

	2013	2014	2015	2016
	Cases	Cases	Cases	Cases
Diphtheria	0	0	0	0
Haemophilus influenzae, invasive disease	15	11	16	16
Measles	0	1	0	0
Mumps	1	3	3	14
Pertussis	27	37	23	11
Polio	0	0	0	0
Rubella	0	0	0	0
Tetanus	0	0	0	0

## Zika

Zika is a mosquito-borne viral disease which can cause fevers with muscle or joint pain or rash. Zika is linked with serious health outcomes including birth defects, miscarriages and Guillain-Barré syndrome. Currently there is no local transmission of Zika in North Carolina. However, several travel-associated cases have been reported.



All cases reported were travel associated

Source: MCHD Communicable Disease Program

# **One Charlotte Health Alliance Special Report**



# The OCHA Commitment

Atrium Health, Mecklenburg County Public Health and Novant Health formed the ONE Charlotte Health Alliance (OCHA) with a vision to improve health and well-being for every community. The mission of ONE Charlotte Health Alliance is to support and maximize health and quality of life through a sustainable, collaborative process by aligning resources and improving access in excluded communities. We have three goals:

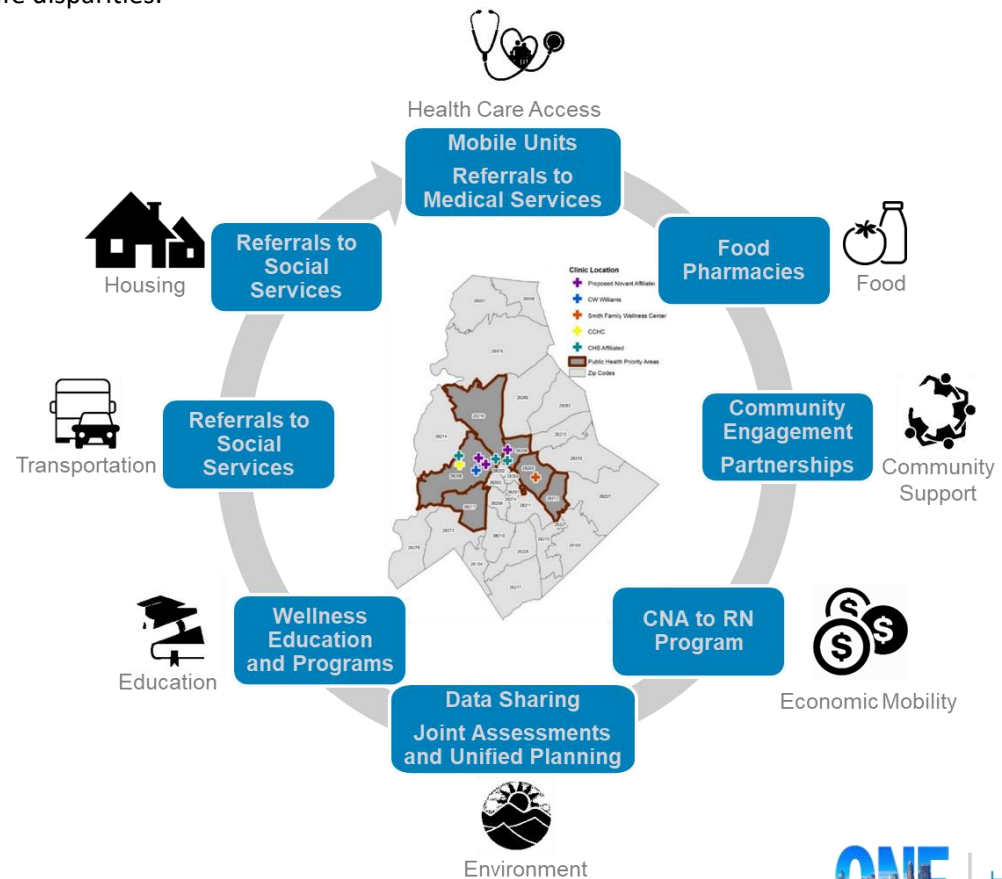
1. Deliver increased services to public health priority areas through aligned care
2. Develop an innovative whole person care delivery system through aligned partnerships
3. Advocate for and advance policy and system changes to increase access to care

The ONE Charlotte Health Alliance will build upon existing community efforts, foster partnerships and create new opportunities to improve access to coordinated health services. As an alliance, we are committed to fulfilling our goals by addressing the top three priorities identified within this report: Mental Health, Access to Care, and Chronic Disease Prevention. Our scope of work will be targeted on the six public health priority areas (28205, 28206, 28208, 28212, 28216, 28217) determined to have the highest health and quality of life disparities.

The ONE Charlotte Health Alliance is able to help by providing:

- **Food pharmacies** providing increased access to healthier food options and health education services to food insecure community members, reducing a key chronic disease risk factor.
- **Connections to health and wellness services** from two mobile units deployed to public health priority areas
- **Mental Health First Aid trainings** in targeted priority areas, increasing knowledge of mental health issues and decreasing stigma to get help.

To demonstrate OCHA alignment, these efforts were documented in the Mecklenburg County Community Health Action Plan. Additionally, each OCHA Partner is committed to implementing further activities to address chronic disease, mental health and access to care for community members in priority zip codes within their individual scopes of work.



## About OCHA Partners



**Atrium Health**, previously Carolinas HealthCare System, one of the nation's leading and most innovative healthcare organizations, provides a full spectrum of healthcare and wellness programs throughout the Southeast region. At the close of 2018, the system facilitated roughly 11.6 million patient encounters and provided a total of \$2.07 billion in community benefit, equating to over \$5.67M in uncompensated care and other benefits to the community each day. Its diverse network of care locations includes one of the five academic medical centers in North Carolina, 40+ hospitals, 35 emergency departments, 900+ care locations, surgical and rehabilitation centers, home health agencies, nursing homes and behavioral health centers, as well as hospice and palliative care services. Atrium Health's Carolinas Medical Center is the area's only Level I Trauma Center, providing the highest level of comprehensive care for critically injured patients and are prepared to respond 24/7 to any type of traumatic injury.

Atrium Health works to enhance the overall health and well-being of its communities through high-quality patient care, education and research programs, and numerous collaborative community engagement and partnerships with 230,000+ community participants in focused community health priority activities.



**Novant Health** exists to improve the health of our communities, one person at a time. Novant Health is a non-profit integrated health care system of 15 medical centers a medical group with over 575 clinic locations. Other facilities and programs include outpatient surgery and diagnostic centers, charitable foundations, rehabilitation programs, and community health outreach programs. Novant Health and its affiliates serve their communities with programs including health education, home health care, prenatal clinics, community clinics and immunization services. Novant Health's over 28,000 employees and 2,500 physician partners care for patients and communities in North Carolina, Virginia, South Carolina and Georgia.

Each element of our integrated system is committed to delivering a remarkable healthcare experience for patients and their families. With world-class technology, personal connections, and care that's easier to access and understand, Novant Health is with our community members every step of the way on their journey to health and wellness.



The mission of **Mecklenburg County Public Health (MCPH)** is to promote and protect the public's health. Their vision is to assure the health and safety of our diverse and changing community today and for future generations

Mecklenburg County Public Health has over 800 employees and multiple divisions, including Preventive Services, Case Management and Justice Partnerships, Population Health, and Clinical Services. Programming ranges from restaurant inspections to school health to developmental services for children. MCPH partners, when possible, with community groups and agencies to deliver services. Examples include a partnership with local medical practices to provide PrEP for HIV prevention to low income individuals; outreach and testing for STIs and HIV in community settings; a partnership with the Charlotte Mecklenburg Police Department to refer children exposed to trauma to care; and responding to a county-wide hepatitis a outbreak by taking vaccination to community sites.

The four overarching goals of the MCPH FY2020-2022 Strategic Business Plan, are to: 1) **Protect** the health of our community by reducing preventable disease 2) **Promote** long and healthy lives for all by decreasing premature death and disability 3) **Provide** exceptional services through highly engaged employees and 4) **Partner** to build a culture of health & wellness through innovative community collaborations.



# OCHA Listening Circles

## Process

Listening circles with community members and stakeholders were implemented to both inform the continued development of OCHA programming and services, specifically mobile medicine, as well as understand current health related needs. The groups consisted of key stakeholders: health and social service providers, community members that live in the public health priority areas, and community health workers. A facilitator guide was developed with input from both Atrium Health and Novant Health leadership and consisted of questions asking about current health needs to how to better engage the community. Atrium Health and Novant Health representatives co-facilitated each session. Sessions consisted of participants touring the mobile unit (or watching a virtual tour) and then having the 45-minute conversations. Refreshments were provided, but participants were not compensated for their time or travel.

When community members were asked to define a “healthy community” they discussed it as an environment that promotes holistic health, including medical, dental, mental and emotional health. A healthy community is one that is addressing factors beyond health, such as access to employment opportunities. Healthy communities are those that are coordinated and enable patients to navigate and access the services. Finally, a healthy community respects and empowers members of the community.

In addition to defining health, communities shared their concerns and barriers to health as lack of communication between patients and providers. Many expressed that various resources exist, but that community members struggle to access them because of cost, lack of awareness, location and hours. Specific health issues mentioned included, hypertension, diabetes, prenatal care, lack of preventive care and mental health. Community members also recognized the social issues that impact health, such as lack of transportation, food insecurity, lack of affordable and stable housing, unaffordable childcare, immigrations status, literacy and segregation.

## Limitations

There are several limitations to these sessions. At the time of writing this report, sessions were not completed in all public health priority areas. It is also noted that participants were mostly women and over age 18. Additional sessions are planned in the future to ensure that a broader perspective is captured.



*OCHA mobile units are designed to address community concerns regarding access to medical, dental and mental healthcare.*

